

# "ANCHOR" LINE



## INDIAN SERVICE

### REGULARLY

#### BETWEEN

## BOMBAY, MARSEILLES AND LIVERPOOL, CALCUTTA AND LONDON.

The following Steamers are now engaged in this service —

Names	Commanders	Tonnage
"CIRCASSIA"	C. F. Osborne R. N. R.	6,720
"CASTALIA"	Wm. Kelso	6,180
"HELYIA"	J. Kimball	6,180
"ASSYRIA"	W. Garrick	6,370
"OLYMPIA"	Alv. Andrews	5,180
"MASSILIA"	W. J. Walter	5,000
"ISCINDIA"	R. Erskine	5,100
"BAVARIA"	F. Witham	4,717
"BOHEMIA"	A. Hunt	3,900
"DALMATIA"	A. Mitchell	6,117
"ANCHORIA"	J. Hamilton	5,410
"MEDIA"		5,418
"ALGERIA"		4,476

These splendid fast sailing Steamers have been built expressly for the Indian trade with accommodation on the upper deck.

Average sea passage to Marseilles 18 days. Liverpool and London 32 days.

The Ports of call are

*Homeward* — SUZ, PORT SAID, MARSEILLES & GIBRALTAR.

*Outward* — GIBRALTAR, PORT SAID & SUZ.

Passengers are booked at through rate in connection with the Trans-Atlantic service from Glasgow, from which port regular weekly steamers of this Line run to New York and also in connection with the Mediterranean service from Marseilles and Naples.

All the Steamers carry a qualified Surgeon and Stewardess and a full complement of Saloon and Bedroom Stewards.

Steamers marked *are fitted with Morse or Wireless Telegraphy*.

Steamers marked *do not carry Surgeon or Stewardess*.

Special Reductions granted to Missionaries, Hospital Nurses, Tea Planters, Railway Employees, and Theatrical Companies; also Reductions granted to Families and on return passages within a year.

Handbooks of general information containing full particulars with regard to rates of Passage-money, Luggage, &c., and information with regard to Overland Journeys to Marseilles or London can be had on application to the various Agencies.

**All Steamers of the Bombay Service will call at Marseilles Outwards and Homewards after the War.**

W. & A. GRAHAM & CO., BOMBAY,

GRAHAM & CO., CALCUTTA, and D. GRAHAM & CO., KARACHI.

**OTHER AGENCIES IN CONNECTION WITH THIS SERVICE.**

BEST & CO., MADRAS.  
DELMFEL, FURSYTH & CO., CALCUTTA & COLOMBO.

ADEN COAL CO., ADEN.  
CORY BROS. & CO., LTD., PORT SAID.  
CUNARD-ANCHOR, NAPLES.

P. A. YOUNG, MARSEILLES.  
G. HEYES & CO., SUZ.  
ANCHOR LINE (HENDERSON BROS.)  
LTD., LONDON, LIVERPOOL, DUNDEE, GIBRALTAR, MANCHESTER AND LONDON.  
HENDERSON BROS., 21 STATE ST.,  
NEW YORK, 35 W. RANDOLPH ST., CHICAGO.

#### HEAD OFFICE:

ANCHOR LINE (HENDERSON BROTHERS), LTD., GLASGOW.

BY SPECIAL APPOINTMENT TO H. E. LORD WILLINGDON  
**THE PREMIER SCULPTURAL STUDIO**  
—SCULPTOR—  
**V. V. WAGH GIRGAUM, BOMBAY.**



**LORD KITCHENER, for H. H. The Maharajah of Kolhapur.**

Mr. Wagh has executed busts of Lord Harding, H. E. Lord Willingdon, H. H. The Maharaja of Durbanga, etc., from sittings, with remarkable success. He is prepared to execute memorials of the above or any other personages in plaster, marble or bronze to order.



# INTERNATIONAL BANKING CORPORATION.

HEAD OFFICE :—55, WALL ST., NEW YORK.

Capital Paid-up	...	G.	\$3,250,000
Reserve Fund	...	G.	\$3,250,000
Undivided Profits	...	G.	\$681,770

LONDON OFFICE : 30, BISHOPSGATE, E.C.

## BRANCHES :

BOMBAY.	HONGKONG.	PEKING.
CALCUTTA.	Kobe.	SAN FRANCISCO.
CANTON.	LONDON.	SHANGHAI.
CEBU.	MANILA.	SINGAPORE.
COLON.	MEDIEIN.	TIENTSIN.
HANKOW.	PANAMA.	YOKOHAMA.

Through its close affiliation with **The National City Bank of New York**, the Bank is also able to offer special services of the Branches of that Institution in Central and South America, namely, **Bahia, Buenos Aires, Havana, Montevideo, Rio De Janeiro, Santiago Cuba, Santos, Sao Paulo and Valparaiso.**

**Current Deposit Accounts opened**, on which interest is allowed at 2 per cent. per annum on Daily Balances from Rs. 1,000 up to Rs. 1,000,000.

**Fixed Deposits** received for 12 months and for shorter periods on terms which may be ascertained on application.

General Banking and Exchange business throughout the world.

## Special Facilities for Business with America.

H. A. W. BRENT,

*Manager.*

BOMBAY OFFICE : —42-48, CHURCH GATE STREET.

CALCUTTA OFFICE : —26-27, DALHOUSIE SQUARE.

# Hongkong and Shanghai Banking Corporation.

(INCORPORATED IN HONGKONG)

Paid-up Capital	...	...	...	...	\$15,000,000
Reserve Liability of Proprietors	...	...	...	...	\$15,000,000
Silver Reserve Fund	...	...	...	...	\$18,000,000
Gold Reserve Fund	...	...	...	...	£1,500,000

**COURT OF DIRECTORS AND HEAD OFFICE  
IN HONGKONG.**

**ADVISORY COMMITTEE IN LONDON.**

## BRANCHES :

AMOY.	IPOH.	RANGOON.
BANGKOK.	JOHORE.	SAIGON.
BATAVIA.	KOBE.	SAN FRANCISCO.
BOMBAY.	KAWATA LUMPUR.	SHANGHAI.
CALCUTTA.	LONDON.	Do. HONGKOW.
CANTON.	LYONS.	SINGAPORE.
COLOMBO.	MALACCA.	SOURABAYA.
FOOCHOW.	MANILA.	TAIPEI.
HANKOW.	NAGASAKI.	TIENTSIN.
HARBIN.	NEW YORK.	TSINGTAU.
HONGKONG.	PEKING.	YLOILO.
	PENANG.	YOKOHAMA.

## Current Deposit Accounts.

Interest allowed at 2 per cent. per annum on Daily Balances of Rs. 1,000 to Rs. 1,00,000 provided the sum accrued amounts to Rs. 5 half-yearly.

## Fixed Deposits

Are received for varying periods up to 12 months on terms which may be ascertained on application. Drafts granted on London and the Chief Commercial places in Europe, India, Australia, America, China, and Japan.

Credits granted, Bills purchased and every description of Banking and Exchange business transacted.

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# LIPTON'S PROVISIONS

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ALL GOODS BEARING OUR LABEL GUARANTEE

---

COCOA

JAMS

PICKLES

SAUC

BISCUITS—LIPTON'S

ALSO SOLE AGENTS FOR

CARR'S BISCUITS

---

ADDRESSES—

CALCUTTA - Post Box 44.

BOMBAY—Post Box 248.

KARACHI—LIPTON'S.

BOMBAY Agents—Messrs. D. C. OOMRIGAR &

BUSRAH—LIPTON'S, Kashla Road.

RANGOON—LIPTON'S or B. MEYER.

# **"PHLOROGEN" "DIBASIC HYPOCHLORITE."**

**A WATER STERILIZING SOLUTION. (The Nestle Process)**

(REGISTERED)

**FOR THE ABSOLUTE PREVENTION OF CHOLERA, ENTERIC, TYPHOID, DYSENTERY, AND ALL WATER-BORNE DISEASES.**

consists of the fluid in a drachm bottle with a glass rod attached to the stopper in a case.

direction. Dip the rod (on which about half a drop of the sterilizer adheres) in half to 1 of water, and stir. The water is instantly sterilized, and is moreover tasteless and clear. The highly contaminated and unsedimented muddy water from the river at Basra is sterilized in this quantity in 45 seconds, as recent experiments prove (June 1916). The above bottle with  $\frac{1}{2}$  ounce Sterilizing Solution sterilizes 200 gallons.

**PRICE ONE RUPEE.**

The Sterilization of Water has been very much brought to the fore during this war. In the chloride of lime is added to water which gives chlorine. In India chlorine water is prepared from hydrochloric acid and potassium chlorate, but both these methods are objectionable and in most cases utterly useless, because the materials are unstable because also the water tastes most objectionably.

is invaluable for large water supplies and wells. The quantity to be used is two teaspoonfuls for 200 gallons.

For Municipalities, etc., we give special rates.

Special features are its Great Sterilizing Power and that it gives a tasteless and colourless water.

For Further Particulars apply to

**LIPS & CO., LTD.,**

**CHEMISTS,  
BOMBAY.**

TELEGRAPH ADDRESS "DIGITALIN," Bombay.

# **THE BOSS STOVE**

**BEST ALL THE YEAR ROUND**

**Simple, Silent. Easy, Efficient, Economical.**

**IN FIVE SIZES**

1 Burner, Rs. 40.    2 Burners, Rs. 65.    3 Burners, Rs. 90.  
4 Burners, Rs. 115.    5 Burners, Rs. 140.

**DELIVERY BOMBAY. PACKING AND FREIGHT EXTRA.**

# **L. ROY SAMPAT**

**OFFICE:**

**10, Collo St.,  
BOMBAY.**

**Telephone 3315.**

**BRANCHES**

**4, Kashmere Gate,  
DELHI.**

**SHOW ROOMS:**

**New Queen's Road,  
BOMBAY.**

**Telephone 3000.**

**NAME "SATCHIT."    Telegrams "RAMLEELA."**

# THE MERCANTILE BANK OF INDIA, LTD.

(Incorporated in England.)

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Capital Authorised ... .. £1,500,000

Paid up ... £562,500      Reserve Fund . £550,000

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HEAD OFFICE      15, Gracechurch St., LONDON, E.C.

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## BOARD OF DIRECTORS.

R. J. BLACK, ESQ. ( <i>Chairman</i> ).	H. MELVILLE SIMONS, ESQ.
JAMES CAMPBELL, ESQ.	SIR DAVID YELL.
JOHN M. RYRIE, ESQ.	P. R. CHALMERS, ESQ.
P. MOULD, <i>Chief Manager</i> .	

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The Bank receives Money on Deposit, buys and sells Bills of Exchange, issues Letters of Credit and Circular Notes, and transacts all kinds of Banking and Agency business on terms which can be ascertained on application.

## BRANCHES AND AGENCIES.

BANGKOK.	HONGKONG.	MADRAS.
BATAVIA.	HOWRAH.	MAURITIUS.
BOMBAY.	KANDY.	PENANG.
CALCUTTA.	KARACHI.	RANGOON.
COLOMBO.	KOTA BHARU,	SHANGHAI.
GALLE.	(KELANTAN).	SINGAPORE.
DELHI.	KUALA LUMPUR.	

“WOTAN”

*Draumwire*

**LAMPS**

AND

**EVERYTHING ELECTRICAL**

ARE MADE BY

**SIEMENS BROTHERS DYNAMO WORKS,  
LIMITED.**

(INCORPORATED IN ENGLAND.)

BRANCHES IN INDIA:—

**RAMPART ROW,  
BOMBAY**

**CLIVE STREET,  
CALCUTTA**

**MOUNT ROAD,  
MADRAS**

# **GREAVES COTTON & CO.,**

**MECHANICAL & ELECTRICAL**

**.. ENGINEERS ..**

## **B O M B A Y**

**SOLE AGENTS FOR--**

- Messrs. HOWARD & BULLOUGH, Ltd., ACCRINGTON.**
- „ **HENRY LIVESEY, Ltd., BLACKBURN.**
- „ **MATHER & PLATT, Ltd., MANCHESTER.**
- „ **WILLIAM TATHAM, Ltd., ROCHDALE.**
- „ **JOSEPH SYKES BROS., Ltd., HUDDERSFIELD.**
- „ **RUSTON PROCTOR & Co., Ltd., LINCOLN.**
- „ **TINKER SHENTON & Co.,**  
**HYDE (NEAR MANCHESTER).**
- „ **YATES & THOM, Ltd., BLACKBURN.**
- „ **THE LIGHTFOOT REFRIGERATION Co., Ltd.,**  
**LONDON.**
- „ **E. R. & F. TURNER, Ltd., IPSWICH.**
- „ **W. H. ALLEN SON & Co., Ltd., BEDFORD.**
- „ **FRANK PEARN & Co., Ltd., MANCHESTER.**
- „ **DRUM ENGINEERING Co., Ltd., BRADFORD.**
- „ **JOHN PICKLES & SON, Ltd., HELDON BRIDGE,**  
**YORKS.**
- „ **HYDRAULIC ENGINEERING Co., Ltd., CHESTER.**
- „ **GEO. HATTERSLEY & SONS, Ltd., KEIGHLEY.**
- „ **JOHN ORMEROD & SONS, Ltd., CASTLETON.**
- „ **WILLIAM KENYON & SON, Ltd., DUKINFIELD.**
- „ **BELLS ASBESTOS Co., Ltd., LONDON.**
- „ **HEENAN & FROUDE, Ltd., WORCESTER.**

# **GREAVES COTTON & CO.,**

**MECHANICAL & ELECTRICAL**  
**ENGINEERS**  
**B O M B A Y**

---

***Complete equipment for:—***

**COTTON SPINNING & WEAVING MILLS.  
BLEACHING WORKS, DYEING WORKS.  
COTTON GINNING & PRESSING FACTORIES.  
ROLLER FLOUR MILLS.  
ICE MAKING & REFRIGERATING PLANTS.  
SAW MILLS.  
WATER WORKS & PUMPING PLANTS.  
ELECTRICAL INSTALLATIONS.**

---

***Large Stock held in Bombay of:***

**STEAM, GAS & OIL ENGINES, BOILERS, ROAD  
ROLLERS, COTTON GINS & GIN SUNDRIES, PUMPS,  
FLOUR MILLS, RICE HULLERS, COTTON DRIVING  
ROPES, BELTING, ELECTRICAL ACCESSORIES OF  
EVERY DESCRIPTION, Etc., Etc.**

---

***PRICES ON APPLICATION.***



# **WILKINSON, HEYWOOD & CLARK, Ltd.**

**LONDON.**

**ESTABLISHED 1796.**

Manufacturers of **Varnishes, Enamels, Distemper Paints, etc.**, for all purposes, specially prepared for the Indian climate.

Agents for **Indian Government Turpentine and Rosin.**

## **Specialities :—**

**" Falcon and Engine " Brand high class Varnishes.**

**" Falconite " Enamel.**

**" Falon " Brand Motor Car Paints.**

All the above are particularly suitable for use on Railway Coaches, Motor Cars and Carriages.

**" Synoleo " Washable Distemper** will not peel or powder off.

**Galvanised Iron Priming Paint**, for first coats on galvanised iron.

**Paints, Distemper, Linseed Oil, Brushes and Sundries**, of high quality, for Public Works, &c.

**Large stocks held in India.**

**BOMBAY BRANCH:**

**Oriental Buildings, Fort, BOMBAY.**

# BANK OF BOMBAY.

<b>CAPITAL PAID UP</b>	...	...	<b>Rs. 1,00,00,000</b>
<b>RESERVE FUND</b>	...	...	<b>Rs. 90,00,000</b>

**Head Office : BOMBAY.**

## BRANCHES :

AHMEDABAD.	JALGAON.
Do. (City Sub-Branch).	KARACHI.
AKOLA.	POONA.
AMRAOTI.	RAJKOT.
BROACH.	SHOLAPUR.
HYDERABAD (Sind).	SUKKUR.
INDORE.	SURAT.
<b>BOMBAY CITY BRANCHES.</b>	MANDVI.
	SANDHURST ROAD.

**CURRENT ACCOUNTS**—Opened free of charge.

**FIXED DEPOSITS**—Received for twelve months and also for short periods and interest allowed at rates which may be ascertained on application.

**SAVINGS BANK DEPOSITS**—Received and interest allowed thereon at three per cent. per annum.

**LOANS AND CASH CREDITS**—Granted on the security of Government Securities, Municipal and Port Trust Debentures, City of Bombay Improvement Trust Debentures, Shares in Guaranteed Railways, Goods and Bullion.

**DISCOUNT ACCOUNTS**—Opened and approved. Mercantile Bills discounted.

**GOVERNMENT AND OTHER SECURITIES**—Received for safe custody. Purchases and Sales effected and Interest and Dividends collected.

Copies of Rules, Powers of Attorney, &c., may be had on application at the Head Office and at any of the Branches.

**R. AITKEN,**

*Secretary and Treasurer.*

# LUND & BLOCKLEY.

Watch & Clock  
Specialists.  
Jewellers & Silversmiths.

Esplanade Road, BOMBAY.

## PRICES OF WRIST WATCHES.

	Rs.	a
Solid Silver Wrist Watch ( $\frac{1}{2}$ Hunter) Radium hands and figures ... ..	44	0
Solid Silver, Screw Case with Plain dials .. ..	47	8
.. .. Radium dials .. ..	57	8
.. .. Black dials & Radium figures. .. ..	45	0
.. .. White dials & Radium figures. .. ..	47	8
Solid Silver, Radium Centre Seconds, Watch suitable for Doctors and Nurses... ..	60	0
Solid Silver Wrist Watch, Radium dials and fitted with unbreakable glass .. ..	35	0
Solid Silver Wrist Watch, Radium dials and fitted with Nickel Case .. ..	27	8
18ct. Gold Screw Case Watch, Plain dial .. ..	135	0
.. .. Radium dial .. ..	145	0

We have also a large selection of Ladies' Gold Wrist Watches with reliable expanding Bracelets from Rs. 145. Pocket Watches of every description.

Every Watch is tested by the Principal before it leaves the premises and 2 years' guarantee given with each Watch.

Silver Curb Chains for Wrist Watches at Rs. 5. Metal protectors at Rs. 2. Silver Rs. 8-8.

# THE YOKOHAMA SPECIE BANK, LD.

(REGISTERED IN JAPAN.)

(ESTABLISHED 1880.)

SUBSCRIBED CAPITAL ... YEN **48,000,000**

PAID-UP CAPITAL ... ,, **30,000,000**

RESERVE FUND .. ... ,, **20,800,000**

**Head Office : YOKOHAMA, JAPAN.**

## BRANCHES & AGENCIES:

TOKIO, KOBE, OSAKA, NAGASAKI, PEKING, TIENTSIN,  
DAIREN (DALNY), RYOJUN (PORT ARTHUR), NEW-  
CHWANG, TIEHLING, FENGTIEN (MUKDEN),  
LIAOYANG, CHANGCHUN, ANTUNG-HSIEN, HAR-  
BIN, TSINGTAU, HANKOW, SHANGHAI, HONG-  
KONG, CALCUTTA, HONOLULU, SAN FRANCISCO,  
LOS ANGELES, NEW YORK, LYONS, LONDON,  
SYDNEY, TSINANFU, SINGAPORE, BOMBAY.

Current Deposit Accounts are opened for approved customers, and Interest is allowed at two per cent. per annum on daily balances of Rs. 1,000 up to Rs. 1,00,000, provided that the amount of half-yearly interest is not less than Rs. 5.

Fixed Deposits are received for one year and shorter periods on terms which may be ascertained on application.

Every description of Banking and Exchange business transacted.

**N. IGARASHI,**

Post Box No. 207.

*Manager, Bombay.*

Hornby Road, Fort, Bombay.

**I. NISHIMAKI,**

Post Box, No. 406.

*Agent, Calcutta.*

Clive Street, Calcutta.

# THE CHEAPEST HOUSE

For Electrical and  
Engineering Goods.

*Send us your Enquiries or call at*

**THE ORIENTAL ENGINEERING  
AND TRADING COMPANY,**  
Ravelin Street, Hornby Road, BOMBAY.

Tangye's Oil, Crude Oil and Suction  
Gas Engines.

# UNITED STATES STEEL PRODUCTS COMPANY,

Importers of Structural Material, Plates, Steel  
Piling, Wire, Nails, Black and Galvanized  
Sheets, Black and Galvanized Pipes and all  
other classes of semi-finished steel.

Export Representatives of:—

**CARNEGIE STEEL COMPANY.**

**NATIONAL TUBE COMPANY.**

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**ILLINOIS STEEL COMPANY.**

**AMERICAN STEEL & WIRE CO.**

**AMERICAN SHEET & TIN PLATE CO.**

**LORAIN STEEL COMPANY.**

**SHELBY STEEL TUBE COMPANY.**

**TENNESSEE COAL, IRON & RAILROAD CO.**

**Bombay Office:—**

Queen's Mansions,

56, Bastion Road, Fort.

**Calcutta Office:—**

Allahabad Bank Buildings,

6, Royal Exchange Place.

**Home Office:—**

30, Church Street,

New York, U. S. America

# Bengal-Nagpur Railway Company, Limited. (INCORPORATED IN ENGLAND)

The shortest route for the transport of traffic between Bombay and Calcutta is *via* Nagpur. If you have not given this route a trial for the goods traffic you are sending between Bombay and Calcutta, do so now.

Enquiries as to rates and other particulars should be addressed to the Traffic Manager, Bengal-Nagpur Railway House, Kidderpore, Calcutta.

A. M. CLARK,  
*Traffic Manager.*

Telegraphic Address: "IMAMI."

Telephone Nos. 2934 & 2507

## THE BOMBAY TILE MART.

ESTABLISHED 1888.

GULAMALI GULAMHUSEIN & CO.,

21, Bank Street, Fort, BOMBAY.

Indian White Marble Quarry  
Owners.

Marble Sculptors, Engravers,  
and Monumental Suppliers.

Encaustic and plain floor tiles,  
Embossed, Enamelled and  
Glazed tiles.

Asbestos Cement Slates and  
Sheets.

Italian and Marseilles Red,  
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Tiles.

Embossed Steel Metallic  
Celling.

Hand Brand, Portland  
Cement.

*Branch*—CHANDNI CHOWK, DELHI.

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ASK FOR

# KABUTO PILSENER BEER

BEST AND  
REFRESHING.

OBTAINABLE EVERYWHERE.

SATISFACTION GUARANTEED.

TERMS VERY MODERATE.

A TRIAL EARNESTLY SOLICITED.

Sole Agents—

**JEENA & CO.,**  
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Agents Wanted Where not Represented.

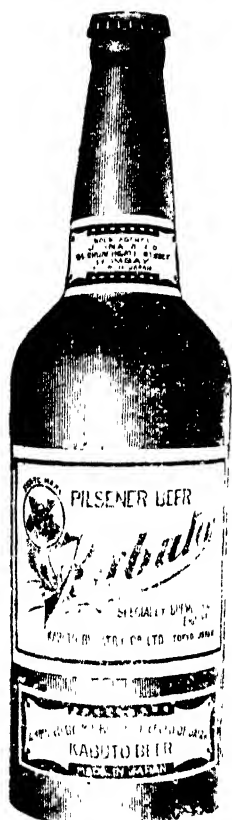
**JEENA & Co.,** *Shipping, Forwarding, Clearing and Passenger Agents.*

Baggage and Merchandise Forwarded to all parts  
of the World.

Cheapest and Quickest Service. Satisfaction Guaranteed.  
Terms very Moderate. A Trial Earnestly Solicited.

London Correspondents—SUTTON & Co., with over  
800 Branches in the United Kingdom.

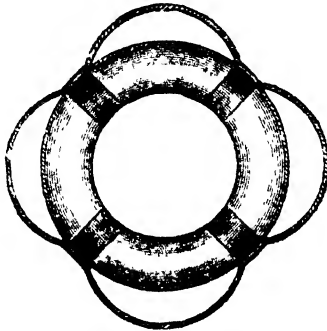
**34, Churchgate Street, Fort, BOMBAY.**



ON GOVERNMENT LIST.

**SHALEBHOY TYEBJEE & SONS.**

ESTABLISHED 1840.



Telephones  
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RESIDENCE  
1596.

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"ROTATOR"  
Code, A. B. C.  
5th Ed.

**SHIPCHANDLERS AND CONTRACTORS TO**

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ORDNANCE FACTORIES & ARSENALS  
GOVT. SUPPLY & TRANSPORT DEPARTMENTS  
RAILWAYS  
LEADING STEAMSHIP COMPANIES  
PORT TRUST, Etc., Etc.

**AGENTS FOR**

THE GANGES MANILLA ROPES  
BRUNTONS WIRE ROPES, Etc., Etc.

**ALWAYS IN STOCK**

CANVAS, SAIL & WATERPROOF SUITABLE FOR  
SHIPS AWNINGS  
MILITARY KIT BAGS  
RAILWAY PAULINS  
WAGON COVERS, Etc., Etc.,

LARGEST STOCK HOLDERS OF HARDWARE, ENGINEERING AND  
RAILWAY APPLIANCES AND TOOLS, BLACKSMITHS' AND  
CARPENTERS' TOOLS, Etc.

**The Manilla Rope Mart of Western India**  
SALEH BUILDINGS, FORT, BOMBAY.



# Pioneers !

Founded in 1885, we are pioneers of everything pertaining to the Automobile and Bicycle Industry. Our premises, which are the finest and largest of their kind in the East, are invariably stocked with the best-made Motor Cars, Motor Bicycles, Bicycles and Accessories from Europe and America.

## Bombay Cycle & Motor Agency,

(LEADING MOTOR HOUSE OF ASIA)

New Queen's Road, BOMBAY.

TELEGRAMS "CYCLOSTERS, Bombay."

BY SPECIAL APPOINTMENT TO H. E. THE GOVERNOR OF BOMBAY.

## VISITORS TO BOMBAY

should not fail to call at

## POHOOMULL BROS

WATSON'S ANNEXE, APOLLO BUNDER,

a place which abounds in deep interest for New-comers and ensures ECONOMY for keen Buyers.

On View :—Gems and Jewellery Old and Modern, Oriental Arts and Curios, Woollen and Silk Carpets, Antiquities, Silverware, Silks, &c

Our Watchword :—SATISFACTION TO OUR CUSTOMERS.



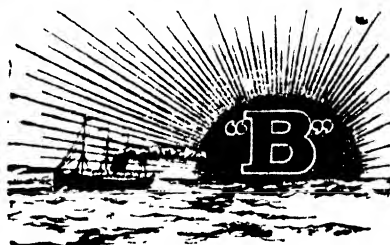
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# W. V. BOWATER & SONS LIMITED.

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"News," Glazed and Unglazed Coloured Printings, Machine Finished and Super Calendered Printings, Coated and Imitation Arts, Typewriting Papers, Art Covers, Cartridges, Writings, M.G., Glazed and Unglazed Natures, Tissues, Sulphites and Browns, Cover Papers, Badami and Native Account Book Papers, and Boards of all descriptions and grades.

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Morden Paper Works.

Cables: "Sparteolus," London.

Codes: A.B.C. (5th Edition) Western-Union  
and Bentley's.

Madras Office: Telephone Buildings, Home Street.

Madras Office: Post Box No. 237.



# **Will You Trade with India ?**

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Manufacturers desirous of entering the Eastern Market are requested to communicate with

**F. W. BARLOW** MERCHANT  
AND AGENT,

— 14-16, GREEN STREET, BOMBAY —

OFFICES AND AGENCIES ALSO AT

CALCUTTA

KARACHI

MADRAS

COLOMBO

RANGOON

CAWNPORE

RAWALPINDI, &c.

LONDON  
AGENTS **OAKES, BROMLEY & CO., LTD.**

34, LEADENHALL STREET, LONDON, E.C.

Through Whom Home Manufacturers may communicate.

**JOHN AINSWORTH & Co., Ltd.,**

**Manufacturers.**

Fancy and Plain Turkish

**TOWELS.**

Honeycomb, Satin, and Fancy

**QUILTS.**

Indents through Merchant Houses only.

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34, Charlotte Street, MANCHESTER.

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THE  
INDIAN YEAR BOOK  
1917.

A STATISTICAL AND HISTORICAL ANNUAL OF  
THE INDIAN EMPIRE, WITH AN  
EXPLANATION OF THE  
PRINCIPAL TOPICS  
OF THE DAY

EDITED BY  
SIR STANLEY REED, LL.D.

***FOURTH YEAR OF ISSUE.***

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## PREFACE.

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The fourth issue of The Indian Year Book makes its appearance a little later than the usual date. For this the Editor offers an apology and an explanation. Despite the delays inevitable during the waging of a great war, when many official publications are delayed and contributors are hard pressed by multifarious duties, the Year Book with the exception of the Railway Section, was ready during the first week in January. The annual administration report on the Indian Railways for the year 1915-16 is not available even now, the first week in February, nor is it likely to be published in time to issue the Year Book before March. Despite the importance of the Railways to India, it is felt that this further delay should not be incurred. Subscribers who desire the latest railway figures will receive a special sheet on application to the Publishers of The Year Book.

The omission is less important this year than usual, because it has necessarily been a period of constructional stagnation on the Indian railways. The concentration of national effort on the winning of the war, the shortage of capital, and the impossibility of obtaining supplies of manufactured articles for extensions, have compelled the railway administrations to confine themselves to the carriage of the traffic offering, together with very pressing works developments. Various causes have combined to make the Indian railways exceptionally busy. The high price of freight, together with the actual shortage of shipping, has diverted the coal traffic from the sea to the rail route. In the closing months of 1916 and the early part of 1917 this caused such a shortage of coal that periodically the booking of freight had to be reduced and the passenger services curtailed. On the other hand, these conditions brought large revenues to the railways. The total railway earnings from April 1st, 1916, to January 20th, 1917, are larger by Rs. 4.52 crores than the corresponding figures for the previous year. Although working expenses have been heavy, there is assured a substantial surplus under this head.

The special developments in India consequent on the war have been fully recorded. These will be found grouped under three main heads—the progress of events in Mesopotamia following the unfortunate battle of Ctesiphon; the growth of political ambitions in India reflected in the sessions of the Indian National Congress and of the Moslem League; the influence of the war on Indian trade, and especially on the direction of Indian trade, and the course of Indian finances in the latest phases of which are studied in India and the War.

In response to the appeal to the public to join in the task of editing the Indian Year Book, many valuable suggestions have been received and incorporated in this issue. That co-operation will be welcomed in future. The statistical information—with the exception of that dealing with the Railways—is far more up-to-date and on all current questions the Year Book has been brought up to the end of the year.

The thanks of the Editor are in special measure due to the able contributors who, amid the many pre-occupations of the war, have continued to give him their invaluable assistance.

THE EDITOR.



# CALENDAR FOR 1917.

## January.

S. ....	...	7	14	21	28	...
M. ....	1	8	15	22	29	...
Tu. ....	2	9	16	23	30	...
W. ....	3	10	17	24	31	...
Th. ....	4	11	18	25	...	...
F. ....	5	12	19	26	.	...
S. ....	6	13	20	27	..	...

## February.

S. ....	...	4	11	18	25	...
M. ....	...	5	12	19	26	...
Tu. ....	...	6	13	20	27	...
W. ....	...	7	14	21	28	...
Th. ....	1	8	15	22	...	...
F. ....	2	9	16	23	...	...
S. ....	3	10	17	24	...	...

## March.

S. ....	...	4	11	18	25	...
M. ....	...	5	12	19	26	...
Tu. ....	...	6	13	20	27	...
W. ....	...	7	14	21	28	...
Th. ....	1	8	15	22	29	...
F. ....	2	9	16	23	30	...
S. ....	3	10	17	24	31	...

## April.

S. ....	1	8	15	22	29	...
M. ....	2	9	16	23	30	...
Tu. ....	3	10	17	24	...	...
W. ....	4	11	18	25	...	...
Th. ....	5	12	19	26	...	...
F. ....	6	13	20	27	...	...
S. ....	7	14	21	28	...	...

## May.

S. ....	...	6	13	20	27	...
M. ....	...	7	14	21	28	...
Tu. ....	1	8	15	22	29	...
W. ....	2	9	16	23	30	...
Th. ....	3	10	17	24	31	...
F. ....	4	11	18	25	...	...
S. ....	5	12	19	26	...	...

## June.

S. ....	...	3	10	17	24	...
M. ....	...	4	11	18	25	...
Tu. ....	...	5	12	19	26	...
W. ....	...	6	13	20	27	...
Th. ....	...	7	14	21	28	...
F. ....	1	8	15	22	29	...
S. ....	2	9	16	23	30	...

## July.

S. ....	1	8	15	22	29	...
M. ....	2	9	16	23	30	...
Tu. ....	3	10	17	24	31	...
W. ....	4	11	18	25	...	...
Th. ....	5	12	19	26	...	...
F. ....	6	13	20	27	...	...
S. ....	7	14	21	28	...	...

## August.

S. ....	...	5	12	19	26	...
M. ....	...	6	13	20	27	...
Tu. ....	...	7	14	21	28	...
W. ....	1	8	15	22	29	...
Th. ....	2	9	16	23	30	...
F. ....	3	10	17	24	31	...
S. ....	4	11	18	25	...	...

## September.

S. ....	...	2	9	16	23	30
M. ....	...	3	10	17	24	...
Tu. ....	...	4	11	18	25	...
W. ....	...	5	12	19	26	...
Th. ....	...	6	13	20	27	...
F. ....	...	7	14	21	28	...
S. ....	1	8	15	22	29	...

## October.

S. ....	...	7	14	21	28	..
M. ....	1	8	15	22	29	...
Tu. ....	2	9	16	23	30	...
W. ....	3	10	17	24	31	...
Th. ....	4	11	18	25	...	...
F. ....	5	12	19	26	...	...
S. ....	6	13	20	27	...	...

## November.

S. ....	..	4	11	18	25	...
M. ....	..	5	12	19	26	...
Tu. ....	...	6	13	20	27	...
W. ....	...	7	14	21	28	...
Th. ....	1	8	15	22	29	...
F. ....	2	9	16	23	30	...
S. ....	3	10	17	24	...	...

## December.

S. ....	...	2	9	16	23	30
M. ....	...	3	10	17	24	31
Tu. ....	...	4	11	18	25	...
W. ....	...	5	12	19	26	...
Th. ....	...	6	13	20	27	...
F. ....	...	7	14	21	28	...
S. ....	1	8	15	22	29	...

# Phases of the Moon—JANUARY 31 Days.

☾ Full Moon .....8th, 1h. 12'0m. P.M.

☉ New Moon .....23rd, 1h. 10'0m. P.M.

☾ Last Quarter .....10th, 5h. 12'1m. P.M.

☾ First Quarter.....30th, 6h. 31'5m A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D	S.
Monday ..	1	1	7	12	6	12	0	P.M. 42	7'45	23 3
Tuesday ..	2	2	7	12	6	13	0	42	8'45	22 54
Wednesday ..	3	3	7	13	6	13	0	43	9'45	22 53
Thursday ..	4	4	7	13	6	14	0	43	10'45	22 44
Friday ..	5	5	7	13	6	15	0	44	11'45	22 41
Saturday ..	6	6	7	14	6	15	0	45	12'45	22 34
Sunday ..	7	7	7	14	6	16	0	45	13'45	22 27
Monday ..	8	8	7	14	6	17	0	45	14'45	22 26
Tuesday ..	9	9	7	14	6	17	0	46	15'45	22 11
Wednesday ..	10	10	7	14	6	18	0	46	16'45	22 2
Thursday ..	11	11	7	15	6	18	0	47	17'45	21 53
Friday ..	12	12	7	15	6	19	0	47	18'45	21 44
Saturday ..	13	13	7	15	6	20	0	48	19'45	21 34
Sunday ..	14	14	7	15	6	20	0	48	20'45	21 24
Monday ..	15	15	7	15	6	21	0	49	21'45	21 13
Tuesday ..	16	16	7	15	6	22	0	49	22'45	21 2
Wednesday ..	17	17	7	15	6	22	0	49	23'45	20 51
Thursday ..	18	18	7	15	6	23	0	49	24'45	20 39
Friday ..	19	19	7	15	6	24	0	50	25'45	20 27
Saturday ..	20	20	7	15	6	24	0	50	26'45	20 14
Sunday ..	21	21	7	15	6	25	0	50	27'45	20 1
Monday ..	22	22	7	15	6	25	0	51	28'45	19 48
Tuesday ..	23	23	7	15	6	26	0	51	0'08	19 34
Wednesday ..	24	24	7	15	6	27	0	51	1'08	19 19
Thursday ..	25	25	7	15	6	27	0	51	2'08	19 5
Friday ..	26	26	7	15	6	28	0	52	3'08	18 51
Saturday ..	27	27	7	15	6	28	0	52	4'08	18 35
Sunday ..	28	28	7	15	6	29	0	52	5'08	18 26
Monday ..	29	29	7	14	6	30	0	52	6'08	18 4
Tuesday ..	30	30	7	14	6	30	0	52	7'08	17 48
Wednesday ..	31	31	7	14	6	31	0	52	8'08	17 32

# Phases of the Moon—FEBRUARY 28 Days.

○ Full Moon..... 7th, 8h. 58'4m. A.M.

● New Moon ..... 21st, 11h. 39'0m P.M

☾ Last Quarter.... 15th, 7h. 23'2m. A.M.

☽ First Quarter....23th, 10h. 13'7m. P.M.

Day of the Week.	Day o the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declina- tion at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H	M.	H.	M. P.M.	D.	° S.
Thursday	..	1	32	7 13	6	32	0	52	8'38	17 15
Friday	..	2	33	7 13	6	32	0	53	9'08	16 58
Saturday	..	3	34	7 13	6	33	0	53	10'08	16 40
Sunday	..	4	35	7 12	6	33	0	53	11'08	16 23
Monday	..	5	36	7 12	6	34	0	53	12'08	16 5
Tuesday	..	6	37	7 11	6	34	0	53	13'08	15 46
Wednesday	..	7	38	7 10	6	35	0	53	14'08	15 28
Thursday	..	8	39	7 10	6	35	0	53	15'08	15 9
Friday	..	9	40	7 10	6	36	0	53	16'08	14 50
Saturday	..	10	41	7 9	6	36	0	53	17'08	14 31
Sunday	..	11	42	7 9	6	37	0	53	18'08	14 11
Monday	..	12	43	7 8	6	37	0	53	19'08	13 52
Tuesday	..	13	44	7 8	6	38	0	53	20'08	13 32
Wednesday	..	14	45	7 8	6	39	0	53	21'08	13 11
Thursday	..	15	46	7 7	6	39	0	53	22'08	12 51
Friday	..	16	47	7 7	6	40	0	53	23'08	12 30
Saturday	..	17	48	7 6	6	40	0	53	24'08	12 10
Sunday	..	18	49	7 6	6	40	0	53	25'08	11 49
Monday	..	19	50	7 5	6	40	0	53	26'08	11 27
Tuesday	..	20	51	7 5	6	41	0	53	27'08	11 6
Wednesday	..	21	52	7 4	6	41	0	53	28'08	10 45
Thursday	..	22	53	7 4	6	42	0	52	0'54	10 23
Friday	..	23	54	7 3	6	42	0	52	1'54	10 1
Saturday	..	24	55	7 2	6	43	0	52	2'54	9 39
Sunday	..	25	56	7 1	6	43	0	52	3'54	9 17
Monday	..	26	57	7 1	6	43	0	52	4'54	8 55
Tuesday	..	27	58	7 0	6	43	0	52	5'54	8 32
Wednesday	..	28	59	7 0	6	44	0	51	6'54	8 10

# Phases of the Moon—MARCH 31 Days.

○ Full Moon .....9th, 8h. 28 0m. A.M.

● New Moon .....23rd, 9h. 35 0m. A.M.

☾ Last Quarter.....16th, 6h. 3 1m. P.M.

☽ First Quarter ....30th, 4h. 6 4m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.				True Noon.	Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.				
			H.	M.	H.	M.	H. M. P. M.	D.	° S.
Thursday	..	1	6	59	6	44	0 51	7 54	7 47
Friday	..	2	6	58	6	44	0 51	8 54	7 24
Saturday	..	3	6	57	6	45	0 51	9 54	7 1
Sunday	..	4	6	56	6	45	0 51	10 54	6 38
Monday	..	5	6	56	6	46	0 51	11 54	6 15
Tuesday	..	6	6	55	6	46	0 50	12 54	5 52
Wednesday	..	7	6	54	6	46	0 50	13 54	5 29
Thursday	..	8	6	53	6	47	0 50	14 54	5 5
Friday	..	9	6	52	6	47	0 50	15 54	4 42
Saturday	..	10	6	51	6	47	0 49	16 54	4 18
Sunday	..	11	6	50	6	47	0 49	17 54	3 55
Monday	..	12	6	49	6	48	0 49	18 54	3 31
Tuesday	..	13	6	48	6	48	0 49	19 54	3 8
Wednesday	..	14	6	48	6	48	0 48	20 54	2 44
Thursday	..	15	6	47	6	48	0 48	21 54	2 20
Friday	..	16	6	46	6	49	0 48	22 54	1 57
Saturday	..	17	6	45	6	49	0 47	23 54	1 33
Sunday	..	18	6	44	6	49	0 47	24 54	1 9
Monday	..	19	6	43	6	49	0 47	25 54	0 46
Tuesday	..	20	6	43	6	50	0 47	26 54	0 22
Wednesday	..	21	6	42	6	50	0 46	27 54	0 2
Thursday	..	22	6	41	6	50	0 46	28 54	0 25
Friday	..	23	6	40	6	50	0 46	0 13	0 49
Saturday	..	24	6	39	6	50	0 45	1 13	1 13
Sunday	..	25	6	39	6	51	0 45	2 13	1 36
Monday	..	26	6	38	6	51	0 45	3 13	2 0
Tuesday	..	27	6	37	6	51	0 44	4 13	2 23
Wednesday	..	28	6	36	6	51	0 44	5 13	2 47
Thursday	..	29	6	35	6	52	0 44	6 13	3 10
Friday	..	30	6	34	6	52	0 43	7 13	3 34
Saturday	..	31	6	34	6	52	0 43	8 13	3 57

# Phases of the Moon—APRIL 30 Days

○ Full Moon ..... 7th, 7h. 18' 8m. P.M.

● New Moon ..... 21st, 7h. 31' 8m. P.M.

☾ Last Quarter .... 15th, 1h. 42' 0m. A.M.

☽ First Quarter ..... 29th, 10h. 52' 0m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.			Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.	Sunset. P.M.	True Noon.		
			H. M.	H. M.	H. M.	D.	N.
Sunday	..	1	6 33	6 52	0 43	9° 13	4 20
Monday	..	2	6 33	6 52	0 43	10° 13	4 43
Tuesday	..	3	6 32	6 53	0 42	11° 13	5 7
Wednesday	..	4	6 31	6 53	0 42	12° 13	5 30
Thursday	..	5	6 30	6 53	0 42	13° 13	5 52
Friday	..	6	6 29	6 53	0 41	14° 13	6 15
Saturday	..	7	6 28	6 54	0 41	15° 13	6 37
Sunday	..	8	6 27	6 54	0 41	16° 13	7 0
Monday	..	9	6 27	6 54	0 41	17° 33	7 23
Tuesday	..	10	6 26	6 55	0 40	18° 13	7 45
Wednesday	..	11	6 25	6 55	0 40	19° 13	8 7
Thursday	..	12	6 24	6 55	0 40	20° 13	8 29
Friday	..	13	6 24	6 55	0 39	21° 13	8 51
Saturday	..	14	6 23	6 56	0 39	22° 13	9 13
Sunday	..	15	6 22	6 56	0 39	23° 13	9 35
Monday	..	16	6 22	6 56	0 39	24° 13	9 56
Tuesday	..	17	6 21	6 56	0 38	25° 13	10 17
Wednesday	..	18	6 20	6 57	0 38	26° 13	10 39
Thursday	..	19	6 19	6 57	0 38	27° 13	10 59
Friday	..	20	6 18	6 57	0 38	28° 13	11 20
Saturday	..	21	6 18	6 57	0 37	29° 13	11 41
Sunday	..	22	6 17	6 58	0 37	0° 72	12 1
Monday	..	23	6 16	6 58	0 37	1° 72	12 21
Tuesday	..	24	6 16	6 58	0 37	2° 72	12 41
Wednesday	..	25	6 15	6 58	0 37	3° 72	13 1
Thursday	..	26	6 15	6 59	0 37	4° 72	13 21
Friday	..	27	6 14	6 59	0 36	5° 72	13 40
Saturday	..	28	6 13	6 59	0 36	6° 72	13 59
Sunday	..	29	6 12	7 0	0 36	7° 72	14 18
Monday	..	30	6 12	7 0	0 36	8° 72	14 37

# Phases of the Moon—MAY 31 Days.

☾ Full Moon ..... 7th, 8h. 13·3m. A.M.

● New Moon ..... 21st, 6h. 16·6m. A.M.

☾ Last Quarter .... 14th, 7h. 17·9m. A.M.

☾ First Quarter ..... 29th, 5h. 3·5m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	N.
Tuesday	1	121	6	11	7	0	0	36	9.72	14 55
Wednesday	2	122	6	10	7	0	0	36	10.72	15 13
Thursday	3	123	6	10	7	1	0	36	11.72	15 31
Friday	4	124	6	10	7	1	0	35	12.72	15 49
Saturday	5	125	6	9	7	2	0	35	13.72	16 6
Sunday	6	126	6	9	7	2	0	35	14.72	16 23
Monday	7	127	6	8	7	2	0	35	15.72	16 40
Tuesday	8	128	6	8	7	3	0	35	16.72	16 57
Wednesday	9	129	6	7	7	3	0	35	17.72	17 13
Thursday	10	130	6	7	7	4	0	35	18.72	17 20
Friday	11	131	6	6	7	4	0	35	19.72	17 45
Saturday	12	132	6	5	7	4	0	35	20.72	18 0
Sunday	13	133	6	5	7	4	0	35	21.72	18 15
Monday	14	134	6	5	7	5	0	35	22.72	18 30
Tuesday	15	135	6	5	7	5	0	35	23.72	18 45
Wednesday	16	136	6	4	7	5	0	35	24.72	18 59
Thursday	17	137	6	4	7	6	0	35	25.72	19 13
Friday	18	138	6	4	7	6	0	35	26.72	19 26
Saturday	19	139	6	3	7	7	0	35	27.72	19 39
Sunday	20	140	6	3	7	7	0	35	28.72	19 52
Monday	21	141	6	2	7	8	0	35	0.27	20 4
Tuesday	22	142	6	2	7	8	0	35	1.27	20 17
Wednesday	23	143	6	2	7	8	0	35	2.27	20 29
Thursday	24	144	6	2	7	9	0	35	3.27	20 40
Friday	25	145	6	2	7	9	0	35	4.27	20 51
Saturday	26	146	6	1	7	9	0	36	5.27	21 2
Sunday	27	147	6	1	7	10	0	36	6.27	21 13
Monday	28	148	6	1	7	10	0	36	7.27	21 23
Tuesday	29	149	6	1	7	11	0	36	8.27	21 32
Wednesday	30	150	6	1	7	11	0	36	9.27	21 42
Thursday	31	151	6	1	7	11	0	36	10.27	21 51

# Phases of the Moon—JUNE 30 Days.

○ Full Moon ..... 5th, 6h. 36·7m. P. M.      ● New Moon ..... 19th, 6h. 32·2m. P. M..  
 ☾ Last Quarter .... 12th, 0h. 8·5m. P. M.      ☽ First Quarter..... 27th, 9h. 38·4m. P. M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M. P.M.		
Friday	..	1	152	6 1	7 12	0 36	11·27	21 59		
Saturday	..	2	153	6 1	7 12	0 36	12·27	22 7		
Sunday	..	3	154	6 1	7 12	0 36	13·27	22 15		
Monday	..	4	155	6 1	7 13	0 37	14·27	22 22		
Tuesday	..	5	156	6 1	7 13	0 37	15·27	22 30		
Wednesday	..	6	157	6 0	7 14	0 37	16·27	22 36		
Thursday	..	7	158	6 0	7 14	0 37	17·27	22 42		
Friday	..	8	159	6 0	7 14	0 38	18·27	22 48		
Saturday	..	9	160	6 0	7 14	0 38	19·27	22 54		
Sunday	..	10	161	6 0	7 15	0 38	20·27	22 58		
Monday	..	11	162	6 1	7 15	0 38	21·27	23 3		
Tuesday	..	12	163	6 1	7 16	0 38	22·27	23 8		
Wednesday	..	13	164	6 1	7 16	0 39	23·27	23 11		
Thursday	..	14	165	6 1	7 16	0 39	24·27	23 15		
Friday	..	15	166	6 1	7 17	0 39	25·27	23 18		
Saturday	..	16	167	6 1	7 17	0 39	26·27	23 20		
Sunday	..	17	168	6 1	7 17	0 39	27·27	23 22		
Monday	..	18	169	6 1	7 17	0 40	28·27	23 24		
Tuesday	..	19	170	6 1	7 18	0 40	29·27	23 26		
Wednesday	..	20	171	6 2	7 18	0 40	0·76	23 26		
Thursday	..	21	172	6 2	7 18	0 40	1·76	23 27		
Friday	..	22	173	6 2	7 18	0 41	2·76	23 27		
Saturday	..	23	174	6 2	7 19	0 41	3·76	23 27		
Sunday	..	24	175	6 3	7 19	0 41	4·76	23 26		
Monday	..	25	176	6 3	7 19	0 41	5·76	23 25		
Tuesday	..	26	177	6 3	7 19	0 41	6·76	23 23		
Wednesday	..	27	178	6 3	7 20	0 42	7·76	23 21		
Thursday	..	28	179	6 3	7 20	0 42	8·76	23 19		
Friday	..	29	180	6 4	7 20	0 42	9·76	23 17		
Saturday	..	30	181	6 4	7 20	0 42	10·76	23 13		

# Phases of the Moon—JULY 31 Days.

○ Full Moon .....5th, 8h. 10'5m. A.M.

● New Moon .....19th, 8h. 30'1m. A.M.

☾ Last Quarter.....11th, 5h. 41'9m. P.M.

☽ First Quarter ....27th, 0h. 10'4m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.			Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.	Sunset. P.M.	True Noon.		
			H. M.	H. M.	H. M. P.M.	D.	N.
Sunday	..	1	6 5	7 20	0 42	11'76	23 10
Monday	..	2	6 5	7 20	0 42	12'76	23 6
Tuesday	..	3	6 5	7 20	0 43	13'76	22 56
Wednesday	..	4	6 6	7 20	0 43	14'76	22 51
Thursday	..	5	6 6	7 20	0 43	15'76	22 45
Friday	..	6	6 6	7 20	0 43	16'76	22 39
Saturday	..	7	6 7	7 20	0 43	17'76	22 32
Sunday	..	8	6 7	7 20	0 43	18'76	22 26
Monday	..	9	6 8	7 19	0 44	19'76	22 19
Tuesday	..	10	6 8	7 19	0 44	20'76	22 12
Wednesday	..	11	6 9	7 19	0 44	21'76	22 3
Thursday	..	12	6 9	7 19	0 44	22'76	21 55
Friday	..	13	6 9	7 19	0 44	23'76	21 47
Saturday	..	14	6 10	7 19	0 44	24'76	21 38
Sunday	..	15	6 10	7 19	0 44	25'76	21 28
Monday	..	16	6 10	7 18	0 44	26'76	21 18
Tuesday	..	17	6 10	7 18	0 45	27'76	21 8
Wednesday	..	18	6 11	7 18	0 45	28'76	20 58
Thursday	..	19	6 11	7 18	0 45	0'17	20 47
Friday	..	20	6 11	7 18	0 45	1'17	20 36
Saturday	..	21	6 12	7 17	0 45	2'17	20 24
Sunday	..	22	6 12	7 17	0 45	3'17	20 12
Monday	..	23	6 13	7 17	0 45	4'17	20 0
Tuesday	..	24	6 13	7 17	0 45	5'17	19 47
Wednesday	..	25	6 13	7 16	0 45	6'17	19 34
Thursday	..	26	6 14	7 16	0 45	7'17	19 21
Friday	..	27	6 14	7 16	0 45	8'17	19 8
Saturday	..	28	6 14	7 16	0 45	9'17	18 54
Sunday	..	29	6 15	7 15	0 45	10'17	18 40
Monday	..	30	6 15	7 15	0 45	11'17	18 30
Tuesday	..	31	6 15	7 15	0 45	12'17	18 25



# Phases of the Moon—AUGUST 31 Days.

○ Full Moon ..... 3rd, 10h. 40·9m. A.M.

● New Moon ..... 17th, 11h. 51·0m. P.M.

☾ Last Quarter .... 10th, 1h. 26·4m. A.M.

☽ First Quarter..... 26th, 0h. 58·2m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	N.
Wednesday	..	1	6	15	7	14	0	45	13·17	18 10
Thursday	..	2	6	15	7	13	0	45	14·17	17 55
Friday	..	3	6	16	7	13	0	45	15·17	17 40
Saturday	..	4	6	16	7	12	0	45	16·17	17 24
Sunday	..	5	6	17	7	12	0	45	17·17	17 8
Monday	..	6	6	17	7	11	0	44	18·17	16 42
Tuesday	..	7	6	17	7	11	0	44	19·17	16 35
Wednesday	..	8	6	18	7	11	0	44	20·17	16 18
Thursday	..	9	6	19	7	11	0	44	21·17	16 2
Friday	..	10	6	19	7	10	0	44	22·17	15 44
Saturday	..	11	6	19	7	9	0	43	24·17	15 27
Sunday	..	12	6	19	7	9	0	43	25·17	15 9
Monday	..	13	6	19	7	9	0	43	26·17	14 51
Tuesday	..	14	6	20	7	8	0	43	27·17	14 33
Wednesday	..	15	6	20	7	8	0	42	28·17	14 14
Thursday	..	16	6	20	7	8	0	42	29·17	13 56
Friday	..	17	6	21	7	7	0	42	0·54	13 37
Saturday	..	18	6	21	7	7	0	42	1·54	13 17
Sunday	..	19	6	21	7	6	0	41	2·54	12 58
Monday	..	20	6	21	7	5	0	41	3·54	12 38
Tuesday	..	21	6	22	7	4	0	40	4·54	12 18
Wednesday	..	22	6	22	7	4	0	40	5·54	11 58
Thursday	..	23	6	22	7	4	0	40	6·54	11 28
Friday	..	24	6	23	7	3	0	40	7·54	11 18
Saturday	..	25	6	23	7	3	0	40	8·54	10 58
Sunday	..	26	6	23	7	2	0	40	9·54	10 37
Monday	..	27	6	23	7	1	0	39	10·54	10 16
Tuesday	..	28	6	23	7	0	0	39	11·54	9 56
Wednesday	..	29	6	23	6	59	0	39	12·54	9 34
Thursday	..	30	6	23	6	58	0	39	13·54	9 12
Friday	..	31	6	23	6	57	0	39	14·54	8 51

# Phases of the Moon—SEPTEMBER 30 Days.

○ Full Moon .....1st, 5h. 58'5m. P.M.

● New Moon .....16th, 3h. 57'5m. P.M.

☾ Last Quarter.....8th, 0h. 35'2m. P.M.

☽ First Quarter ....24th, 11h. 11'4m. A.M.

Day of the Week.	Day of the Month.	Day o the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	N.
Saturday	..	1	244	6 23	6 54	0 39			14°54	8 29
Sunday	..	2	245	6 23	6 53	0 38			15°54	8 7
Monday	..	3	246	6 24	6 52	0 38			16°54	7 46
Tuesday	..	4	247	6 24	6 51	0 38			17°54	7 54
Wednesday	..	5	248	6 24	6 51	0 37			18°54	7 1
Thursday	..	6	249	6 25	6 50	0 37			19°54	6 39
Friday	..	7	250	6 25	6 49	0 37			20°54	6 17
Saturday	..	8	251	6 25	6 48	0 36			21°54	5 54
Sunday	..	9	252	6 25	6 47	0 36			22°54	5 32
Monday	..	10	253	6 25	6 46	0 36			23°54	5 9
Tuesday	..	11	254	6 25	6 46	0 35			24°54	4 46
Wednesday	..	12	255	6 26	6 45	0 35			25°54	4 28
Thursday	..	13	256	6 26	6 44	0 35			26°54	4 1
Friday	..	14	257	6 26	6 43	0 35			27°54	3 38
Saturday	..	15	258	6 26	6 42	0 34			28°54	3 15
Sunday	..	16	259	6 26	6 41	0 34			29°54	2 51
Monday	..	17	260	6 26	6 40	0 34			0°86	2 28
Tuesday	..	18	261	6 27	6 39	0 34			1°86	2 5
Wednesday	..	19	262	6 27	6 38	0 33			2°86	1 42
Thursday	..	20	263	6 27	6 38	0 33			3°86	1 18
Friday	..	21	264	6 27	6 37	0 33			4°86	0 54
Saturday	..	22	265	6 28	6 36	0 32			5°86	0 32
Sunday	..	23	266	6 28	6 35	0 32			6°86	0 8
Monday	..	24	267	6 28	6 35	0 31			7°86	0 14
Tuesday	..	25	268	6 28	6 34	0 31			8°86	0 38
Wednesday	..	26	269	6 28	6 33	0 30			9°86	1 2
Thursday	..	27	270	6 29	6 32	0 30			10°86	1 25
Friday	..	28	271	6 29	6 31	0 29			11°86	1 48
Saturday	..	29	272	6 29	6 30	0 29			12°86	2 12
Sunday	..	30	273	6 29	6 30	0 28			13°86	2 35

# Phases of the Moon—OCTOBER 31 Days.

○ Full Moon .....1st, 2h. 1'1m. A.M.  
 ☾ Last Quarter ....8th, 3h. 44'3m. A.M.

● New Moon.....16th, 8h. 11'0m.A.M.  
 ☽ First Quarter.....23rd, 8h. 17'0m. P.M.  
 ○ Full Moon.....30th, 11h. 49'2m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	S.
Monday ..	1	274	6	29	6	28	0	P.M. 29	14° 86	2 59
Tuesday ..	2	275	6	29	6	27	0	28	15° 86	3 22
Wednesday ..	3	276	6	30	6	27	0	28	16° 86	3 45
Thursday ..	4	277	6	30	6	26	0	28	17° 86	4 9
Friday ..	5	278	6	30	6	26	0	28	18° 86	4 32
Saturday ..	6	279	6	31	6	25	0	27	19° 86	4 55
Sunday ..	7	280	6	31	6	24	0	27	20° 86	5 19
Monday ..	8	281	6	31	6	24	0	27	21° 86	5 41
Tuesday ..	9	282	6	31	6	23	0	27	22° 86	6 3
Wednesday ..	10	283	6	31	6	22	0	26	23° 86	6 27
Thursday ..	11	284	6	31	6	21	0	26	24° 86	6 49
Friday ..	12	285	6	32	6	20	0	26	25° 86	7 11
Saturday ..	13	286	6	32	6	19	0	26	26° 86	7 35
Sunday ..	14	287	6	33	6	18	0	26	27° 86	7 57
Monday ..	15	288	6	33	6	17	0	25	28° 86	8 19
Tuesday ..	16	289	6	33	6	17	0	25	0° 09	8 42
Wednesday ..	17	290	6	33	6	16	0	25	1° 09	9 4
Thursday ..	18	291	6	34	6	15	0	25	2° 09	9 26
Friday ..	19	292	6	34	6	14	0	25	3° 09	9 47
Saturday ..	20	293	6	34	6	13	0	25	4° 09	10 9
Sunday ..	21	294	6	34	6	12	0	24	5° 09	10 31
Monday ..	22	295	6	34	6	12	0	24	6° 09	10 52
Tuesday ..	23	296	6	35	6	11	0	24	7° 09	11 13
Wednesday ..	24	297	6	35	6	10	0	24	8° 09	11 34
Thursday ..	25	298	6	35	6	9	0	23	9° 09	11 55
Friday ..	26	299	6	35	6	9	0	23	10° 09	12 16
Saturday ..	27	300	6	36	6	8	0	23	11° 09	12 36
Sunday ..	28	301	6	36	6	8	0	23	12° 09	12 57
Monday ..	29	302	6	36	6	8	0	22	13° 09	13 17
Tuesday ..	30	303	6	37	6	7	0	22	14° 09	13 36
Wednesday ..	31	304	6	38	6	7	0	22	15° 09	13 56

# Phases of the Moon—NOVEMBER 30 Days.

☾ Last Quarter ....6th, 10h. 23'5m. P.M.

☽ First Quarter.....22nd, 3h. 58'8m. A.M.

● New Moon .....14th, 11h. 58'5m. P.M.

○ Full Moon .....29th, 0h. 11'3m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M. P.M.	D.	S.
Thursday	..	1	305	6 39	6 6	0 22	16°10	14 16		
Friday	..	2	306	6 39	6 6	0 22	17°10	14 35		
Saturday	..	3	307	6 40	6 5	0 22	18°19	14 54		
Sunday	..	4	308	6 40	6 5	0 22	19°19	15 13		
Monday	..	5	309	6 41	6 4	0 22	20°19	15 32		
Tuesday	..	6	310	6 41	6 4	0 23	21°19	15 50		
Wednesday	..	7	311	6 42	6 4	0 23	22°19	16 8		
Thursday	..	8	312	6 42	6 3	0 23	23°19	16 26		
Friday	..	9	313	6 43	6 3	0 23	24°19	16 43		
Saturday	..	10	314	6 43	6 2	0 23	25°19	17 0		
Sunday	..	11	315	6 43	6 2	0 24	26°19	17 17		
Monday	..	12	316	6 44	6 1	0 24	27°19	17 34		
Tuesday	..	13	317	6 45	6 1	0 24	28°19	17 50		
Wednesday	..	14	318	6 45	6 1	0 24	29°19	18 6		
Thursday	..	15	319	6 46	6 1	0 24	0°53	18 22		
Friday	..	16	320	6 46	6 1	0 25	1°53	18 37		
Saturday	..	17	321	6 47	6 1	0 25	2°53	18 52		
Sunday	..	18	322	6 47	6 1	0 25	3°53	19 6		
Monday	..	19	323	6 48	6 1	0 26	4°53	19 21		
Tuesday	..	20	324	6 48	6 0	0 26	5°53	19 35		
Wednesday	..	21	325	6 49	6 0	0 26	6°53	19 49		
Thursday	..	22	326	6 49	6 0	0 26	7°53	20 2		
Friday	..	23	327	6 50	6 0	0 26	8°53	20 15		
Saturday	..	24	328	6 50	6 0	0 26	9°53	20 27		
Sunday	..	25	329	6 51	6 0	0 27	10°53	20 39		
Monday	..	26	330	6 51	6 0	0 27	11°53	20 51		
Tuesday	..	27	331	6 52	6 0	0 27	12°53	21 3		
Wednesday	..	28	332	6 53	6 0	0 27	13°53	21 14		
Thursday	..	29	333	6 54	6 0	0 27	14°53	21 24		
Friday	..	30	334	6 54	6 0	0 27	15°53	21 34		

# Phases of the Moon—DECEMBER 31 Days.

☾ Last Quarter ....6th, 7h. 43·8m. P.M.

☽ First Quarter ....21st, 11h. 37·3m. A.M.

● New Moon .....14th, 2h. 47·3m. P.M.

○ Full Moon.....28th, 8h. 21·6m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H. P. M.	M. M.	D.	S.
Saturday	..	1	335	6 55	6 0	0	0	28	16°53	21 45
Sunday	..	2	336	6 55	6 0	0	0	28	17°53	21 52
Monday	..	3	337	6 56	6 0	0	0	28	18°53	22 2
Tuesday	..	4	338	6 57	6 0	0	0	29	19°53	22 10
Wednesday	..	5	339	6 57	6 1	0	0	29	20°53	22 19
Thursday	..	6	340	6 58	6 1	0	0	30	21°53	22 28
Friday	..	7	341	6 58	6 1	0	0	30	22°53	22 34
Saturday	..	8	342	6 59	6 1	0	0	30	23°53	22 40
Sunday	..	9	343	7 0	6 2	0	0	31	24°53	22 47
Monday	..	10	344	7 1	6 2	0	0	31	25°53	22 53
Tuesday	..	11	345	7 1	6 2	0	0	32	26°53	22 59
Wednesday	..	12	346	7 2	6 3	0	0	32	27°53	23 3
Thursday	..	13	347	7 2	6 3	0	0	33	28°53	23 7
Friday	..	14	348	7 3	6 3	0	0	34	29°53	23 12
Saturday	..	15	349	7 4	6 4	0	0	34	0°91	23 15
Sunday	..	16	350	7 5	6 4	0	0	35	1°91	23 18
Monday	..	17	351	7 5	6 5	0	0	35	2°91	23 21
Tuesday	..	18	352	7 6	6 5	0	0	36	3°91	23 23
Wednesday	..	19	353	7 6	6 5	0	0	36	4°91	23 25
Thursday	..	20	354	7 7	6 6	0	0	36	5°91	23 26
Friday	..	21	355	7 8	6 6	0	0	37	6°91	23 27
Saturday	..	22	356	7 9	6 6	0	0	37	7°91	23 27
Sunday	..	23	357	7 9	6 6	0	0	37	8°91	23 27
Monday	..	24	358	7 10	6 7	0	0	38	9°91	23 26
Tuesday	..	25	359	7 10	6 8	0	0	38	10°91	23 25
Wednesday	..	26	360	7 10	6 9	0	0	39	11°91	23 24
Thursday	..	27	361	7 11	6 9	0	0	39	12°91	23 22
Friday	..	28	362	7 11	6 10	0	0	40	13°91	23 19
Saturday	..	29	363	7 11	6 10	0	0	41	14°91	23 16
Sunday	..	30	364	7 11	6 11	0	0	41	15°91	23 13
Monday	..	31	365	7 11	6 11	0	0	42	16°91	23 8

# CALENDAR FOR 1918.

## January.

S. ....	...	6	13	20	27	...
M. ....	...	7	14	21	28	...
Tu. ....	1	8	15	22	29	...
W. ....	2	9	16	23	30	...
Th. ....	3	10	17	24	31	...
F. ....	4	11	18	25	...	...
S. ....	5	12	19	26	...	...

## February.

S. ....	...	3	10	17	24	...
M. ....	...	4	11	18	25	...
Tu. ....	...	5	12	19	26	...
W. ....	...	6	13	20	27	...
Th. ....	...	7	14	21	28	...
F. ....	1	8	15	22	...	...
S. ....	2	9	16	23	..	...

## March.

S. ....	...	3	10	17	24	31
M. ....	...	4	11	18	25	...
Tu. ....	...	5	12	19	26	...
W. ....	...	6	13	20	27	...
Th. ....	...	7	14	21	28	...
F. ....	1	8	15	22	29	...
S. ....	2	9	16	23	30	...

## April.

S. ....	...	7	14	21	28	...
M. ....	1	8	15	22	29	...
Tu. ....	2	9	16	23	30	...
W. ....	3	10	17	24	...	...
Th. ....	4	11	18	25	...	...
F. ....	5	12	19	26	...	...
S. ....	6	13	20	27	...	...

## May.

S. ....	...	5	12	19	26	...
M. ....	...	6	13	20	27	...
Tu. ....	...	7	14	21	28	...
W. ....	1	8	15	22	29	...
Th. ....	2	9	16	23	30	...
F. ....	3	10	17	24	31	...
S. ....	4	11	18	25	...	...

## June.

S. ....	...	2	9	16	23	30
M. ....	...	3	10	17	24	...
Tu. ....	...	4	11	18	25	...
W. ....	...	5	12	19	26	...
Th. ....	...	6	13	20	27	...
F. ....	...	7	14	21	28	...
S. ....	1	8	15	22	29	...

## July.

S. ....	...	7	14	21	28	...
M. ....	1	8	15	22	29	...
Tu. ....	2	9	16	23	30	...
W. ....	3	10	17	24	31	...
Th. ....	4	11	18	25	...	...
F. ....	5	12	19	26	...	...
S. ....	6	13	20	27	...	...

## August.

S. ....	...	4	11	18	25	...
M. ....	...	5	12	19	26	...
Tu. ....	...	6	13	20	27	...
W. ....	...	7	14	21	28	...
Th. ....	1	8	15	22	29	...
F. ....	2	9	16	23	30	...
S. ....	3	10	17	24	31	...

## September.

S. ....	1	8	15	22	29	...
M. ....	2	9	16	23	30	...
Tu. ....	3	10	17	24	...	...
W. ....	4	11	18	25	...	...
Th. ....	5	12	19	26	...	...
F. ....	6	13	20	27	...	...
S. ....	7	14	21	28	...	...

## October.

S. ....	...	6	13	20	27	...
M. ....	...	7	14	21	28	...
Tu. ....	1	8	15	22	29	...
W. ....	2	9	16	23	30	...
Th. ....	3	10	17	24	31	...
F. ....	4	11	18	25	...	...
S. ....	5	12	19	26	...	...

## November.

S. ....	...	3	10	17	24	...
M. ....	...	4	11	18	25	...
Tu. ....	...	5	12	19	26	...
W. ....	...	6	13	20	27	...
Th. ....	...	7	14	21	28	...
F. ....	1	8	15	22	29	...
S. ....	2	9	16	23	30	...

## December.

S. ....	1	8	15	22	29	...
M. ....	2	9	16	23	30	...
Tu. ....	3	10	17	24	31	...
W. ....	4	11	18	25	...	...
Th. ....	5	12	19	26	...	...
F. ....	6	13	20	27	...	...
S. ....	7	14	21	28	...	...



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## India in 1916.

The history of India during the second and part of the third year of the war has been chequered. In one sense the war has imposed less strain on the country. The Indian Army Corps which thrown into the fight in 1914 provided the only available trained reserve in the British Empire was withdrawn before the winter of 1915. Part of it returned to cantonments, part went on service to Egypt and Mesopotamia. But on the other hand the progress of events in Mesopotamia brought the fighting nearer to her doors. When the last edition of the Year Book was issued the news of the unfortunate victory of Ctesiphon, near Baghdad, was slowly filtering through. Thereafter the campaign in Mesopotamia was a record of heroic failure. After desperate fighting the Field Force, principally composed of British troops, had to abandon the attempt to cut a path to the beleaguered garrison of Kut-al-Amara which surrendered; a season of unusual sickness subsequently severely tried the troops of the Field Force. A large part of India was converted into a hospital for the sick and wounded. Both in the conduct of the campaign and in the treatment of the sick and wounded there was occasion for sharp criticism; this has been remedied and a vast improvement has been effected in the organisation and control of the troops in Mesopotamia, auguring well for the day when the offensive will be resumed.

These unfortunate episodes had no reflection on India itself. Our enemies were busy at our gates. Embassies from the Central Powers and their subordinate Allies were energetic in Afghanistan and amongst the tribesmen of the North-West Frontier. But His Majesty the Amir, faithful to his pledge of neutrality, closely kept the peace. The stirrings of strife on the Frontier failed to cause serious trouble. In some places they were countered by their fellow tribesmen. There were certain laments and excursions but except for the association with the Mesopotamian campaign India has felt in a wholly minor degree the influence of the war.

Materially the year was one of abounding prosperity. The season of 1915 was a good one: the monsoon of 1916 was one of the most copious recorded. The cause of complaint, where it existed, was of too much rain, not too little. The conditions set up by the war induced a large demand for Indian produce at high prices; the absence of foreign competition in many staples caused an exceptional demand for Indian manufactures at remunerative prices to spring up. Materially therefore the year 1916 was for India one of altogether remarkable prosperity. Trade and manufactures flourished; money poured into the country; and these conditions were reflected in periodical bursts of speculation at Calcutta and Bombay.

In several important respects too the financial and economic organisation of India proved its soundness under the strain of war. In the Budget of 1915 no fresh taxation was imposed, Government preferring to meet the deficit that arose by temporary borrowing. This course was impracticable in 1916, owing to the prolongation of the war, and in the Budget introduced in March it was decided to raise three millions sterling by additional taxation chiefly by import and export duties and an enhancement of the income tax. This, the largest enhancement of Indian taxation in any single year, was cheerfully accepted as one of the responsibilities of war. The revenue has come in so well that the Government is assured of a large surplus in 1917, that surplus has been anticipated in part in order to discharge temporary debt in London. In ordinary years India borrows largely in London for capital expenditure; India has not borrowed in London but has repaid her floating debt, she has raised in India a loan of nearly seven crores of rupees—the largest in her modern history—for current requirements. The Indian currency system, which was for the first time subjected to the test of war, emerged with complete credit; the fluctuations of Indian exchange were insignificant. Indians also invested substantial sums in the British War loans, and further lightened the pressure in the London money market by repurchasing many Indian securities quoted there.

The danger is lest India, absorbed in this material prosperity, should become less alive to the transcendental ethical issues involved in the war. The war charities are innumerable; the flow of funds for every object which aims at alleviating the distress caused by the war is continuous. In this great work the Ruling Princes and Indian Chiefs are vying with the generosity of British India. Nevertheless there is manifest a certain tendency to sigh for peace not because the great objects for which the war is being fought have been secured, but because of the strain of continuous loss, even if chiefly borne by others. Then the political truce which was inaugurated at the outset of the war is being disturbed. Some Indians are chafing at the non-arrival of the liberal reforms which will follow the termination of the war. Others view with jealousy not unmingled with distrust, the great attention paid to the Dominions, to what seems to be the exclusion of India. Ambitions and hopes are being fostered which cannot be satisfied in full without a substantial revolution in Indian polity. These issues are perhaps the inevitable growths from a war which is chiefly waged in a distant theatre. They lie on the surface rather than at the roots. But they are ruffling the surface of tranquil India, although they have nowhere weakened by a fraction the determination that this war must be fought to a finish.

# The History of India in Outline.

No history of India can be proportionate, and the briefest summary must suffer from the same defect. Even a wholesale acceptance as history of mythology, tradition, and folklore will not make good, though it makes picturesque, the many gaps that exist in the early history of India: and, though the labours of modern geographers and archaeologists have been amazingly fruitful, it cannot be expected that these gaps will ever be filled to any appreciable extent. Approximate accuracy in chronology and an outline of dynastic facts are all that the student can look for up to the time of Alexander, though the briefest excursion into the by-ways of history will reveal to him many alluring and mysterious fields for speculation. There are, for example, to this day castles that believe they sprang originally from the loins of a being who landed "from an impossible boat on the shores of a highly improbable sea"; and the great epic poems contain plentiful statements equally difficult of reconciliation with modern notions of history as a science. But from the Jataka stories and the Puranas, much valuable information is to be obtained, and, for the benefit of those unable to go to these and other original sources, it has been distilled by a number of writers.

The orthodox Hindu begins the political history of India more than 3000 years before Christ, with the war waged on the banks of the Jumna between the sons of Kuru and the sons of Pandu; but the modern critic prefers to omit several of those remote centuries and to take 600 B. C., or thereabouts as his starting point. At that time much of the country was covered with forest, but the Aryan races, who had entered India from the north, had established in parts a form of civilization far superior to that of the aboriginal savages, and to this day there survive cities, like Benares, founded by those invaders. In like manner the Dravidian invaders from an unknown land, who overran the Deccan and the Southern part of the Peninsula, crushed the aborigines, and, at a much later period, were themselves subdued by the Aryans. Of these two civilizing forces, the Aryan is the better known, and of the Aryan kingdoms the first of which there is authentic record is that of Magadha, or Bihar, on the Ganges. It was in, or near, this powerful kingdom that Jainism and Buddhism had their origin, and the fifth King of Magadha, Bimbisara by name, was the friend and patron of Gautama Buddha. The King mentioned was a contemporary of Darius, autocrat of Persia (521 to 485 B. C.) who annexed the Indus valley and formed from his conquest an Indian satrapy which paid as tribute the equivalent of about one million sterling. Detailed history, however, does not become possible until the invasion of Alexander in 326 B.C.

## Alexander the Great.

That great soldier had crossed the Hindu Kush in the previous year and had captured Aornos, on the Upper Indus. In the spring of 326 he crossed the river at Ohind, received the submission of the King of Taxila, and marched against Porus who ruled the fertile country between the rivers Hydaspes (Jhelum) and

Akesines (Chenab). The Macedonian carried all before him, defeating Porus at the battle of the Hydaspes, and crossing the Chenab and Ravi. But at the River Hyphasia (Bias) his weary troops mutinied, and Alexander was forced to turn back and retire to the Jhelum where a fleet to sail down the rivers to the sea was nearly ready. The wonderful story of Alexander's march through Mekran and Persia to Babylon, and of the voyage of Nearchus up the Persian Gulf is the climax to the narrative of the invasion but is not part of the history of India. Alexander had stayed nineteen months in India and left behind him officers to carry on the Government of the kingdoms he had conquered: but his death at Babylon, in 323, destroyed the fruits of what has to be regarded as nothing but a brilliant raid, and within two years his successors were obliged to leave the Indian provinces, heavily scarred by war but not hellenized.

The leader of the revolt against Alexander's generals was a young Hindu, Chandragupta who was an illegitimate member of the Royal Family of Magadha. He dethroned the ruler of that kingdom, and became so powerful that he is said to have been able to place 600,000 troops in the field against Seleucus, to whom Babylon had passed on the death of Alexander. This was too formidable an opposition to be faced, and a treaty of peace was concluded between the Syrian and Indian monarchs which left the latter the first paramount Sovereign of India (321 B. C.) with his capital at Pataliputra, the modern Patna and Bankipore. Of Chandragupta's court and administration a very full account is preserved in the fragments that remain of the history compiled by Megasthenes, the ambassador sent to India by Seleucus. His memorable reign ended in 297 B. C. when he was succeeded by his son Bindusara, who in his turn was succeeded by Asoka (269—231 B. C.) who recorded the events of his reign in numerous inscriptions. This king, in an unusually bloody war, added to his dominions the kingdom of Kalinga (the Northern Orissa) and then becoming a convert to Buddhism, resolved for the future to abstain from conquest by force of arms. The consequences of the conversion of Asoka were amazing. He was not intolerant of other religions, and did not endeavour to force his creed on his "children". But he initiated measures for the propagation of his doctrine with the result that "Buddhism, which had hitherto been a merely local sect in the valley of the Ganges, was transformed into one of the greatest religions of the world—the greatest, probably, if measured by the number of adherents. This is Asoka's claim to be remembered; this it is which makes his reign an epoch, not only in the history of India, but in that of the world." The wording of his edicts reveal him as a great king as well as a great missionary, and it is to be hoped that the excavations now being carried on in the ruins of his palace may throw yet more light on his character and times. On his death the Maurya kingdom fell to pieces. Even during his reign there had been signs of new forces at work on the borderland of India, where the inde-

pendent kingdoms of Bactria and Parthia had been formed, and subsequent to it there were frequent Greek raids into India. The Greek in Bactria, however, could not withstand the overwhelming force of the westward migration of the Yuch-chi horde, which, in the first century A. D., also ousted the Indo-Parthian kings from Afghanistan and North-Western India.

The first of these Yuch-chi kings to annex a part of India was Kadphises II (A. D. 85—125), who had been defeated in a war with China, but crossed the Indus and consolidated his power eastward as far as Benares. His son Kanishka (whose date is much disputed) left a name which to Buddhists stands second only to that of Asoka. He greatly extended the boundaries of his empire in the North, and made Peshawar his capital. Under him the power of the Kushan clan of the Yuch-chi reached its zenith and did not begin to decay until the end of the second century, concurrently with the rise in middle India of the Andhra dynasty which constructed the Amaravati stupa, "one of the most elaborate and precious monuments of plety ever raised by man."

### The Gupta Dynasty.

Early in the fourth century there arose Patalliputra, the Gupta dynasty which was of great importance. Its founder, Maharaja Chandra, his son Samudragupta, who ruled for some fifty years from A.D. 326, was a king of the greatest distinction. His aim of subduing all India was not indeed fulfilled but he was able to exact tribute from the kingdoms of the South and even from Ceylon, and, in addition to being a warrior, he was a patron of the arts and of Sanskrit literature. The rule of his son, Chandragupta, was equally distinguished and is commemorated in an inscription on the famous iron pillar near Delhi, as well as in the writings of the Chinese pilgrim Fa-hien who pays a great tribute to the equitable administration of the country. It was not until the middle of the fifth century that the fortunes of the Gupta dynasty began to wane—in face of the onset of the White Huns from Central Asia—and by 480 the dynasty had disappeared. The following century all over India was one of great confusion, apparently marked only by the rise and fall of petty kingdoms, until a monarch arose, in A.D. 606, capable of consolidating an Empire. This was the Emperor Harsha who, from Thanagar near Ambala, conquered Northern India and extended his territory South to the Nerbudda. Imitating Asoka in many ways, this Emperor yet "felt no embarrassment in paying adoration in turn to Shiva, the Sun, and Buddha at a great public ceremonial." Of his times a graphic picture has been handed down in the work of a Chinese "Master of the Law," Hsuen Tsang by name. Harsha was the last native paramount sovereign of Northern India; on his death in 648 his throne was usurped by a Minister, whose treacherous conduct towards an embassy from China was quickly avenged, and the kingdom so laboriously established lapsed into a state of intestine strife which lasted for a century and a half.

### The Andhras and Rajputs.

In the meantime in Southern India the Andhras had attained to great prosperity and

carried on a considerable trade with Greece, Egypt and Rome, as well as with the East. Their domination ended in the fifth century A. D. and a number of new dynasties, of which the Pallavas were the most important, began to appear. The great way in turn for the Chalukyas, who for two centuries remained the most important Deccan dynasty, one branch uniting with the Cholas. But the fortunes of the Southern dynasties are so involved, and in many cases so little known, that to recount them briefly is impossible. Few names of note stand out from the record, except those of Vikramaditya (11th century) and a few of the later Hindu rulers who made a stand against the growing power of Islam, of the rise of which an account is given below. In fact the history of mediæval India is singularly devoid of unity. Northern India was in a state of chaos from about 650 to 950 A.D. not unlike that which prevailed in Europe of that time, and materials for the history of these centuries are very scanty. In the absence of any powerful rulers the jungle began to gain back what had been wrested from it; ancient capitals fell into ruins from which in some cases they have not even yet been disturbed, and the aborigines and various foreign tribes began to assert themselves so successfully that the Aryan element was chiefly confined to the Doab and the Eastern Punjab. It is not therefore so much for the political as for the religious and social history of this anarchical period that one must look. And the greatest event—if a slow process may be called an event—of the middle ages was the transition from tribe to caste, the final disappearance of the old four-fold division of Brahmins, Kshatriyas, Vaisyas, and Sudras, and the formation of the new division of pure and impure largely resting upon a classification of occupations. But this social change was only a part of the development of the Hindu religion into a form which would include in its embrace the many barbarians and foreigners in the country who were outside it. The great political event of the period was the rise of the Rajputs as warriors in the place of the Kshatriyas. Their origin is obscure but they appeared in the 8th century and spread, from their two original homes in Rajputana and Oudh, into the Punjab, Kashmir, and the Central Himalayas, assimilating a number of fighting clans and binding them together with a common code. At this time Kashmir was a small kingdom which exercised an influence on India wholly disproportionate to its size. The only other kingdom of importance was that of Kanauj—in the Doab and Southern Oudh—which still retained some of the power to which it had reached in the days of Harsha, and of which the renown extended to China and Arabia.

With the end of the period of anarchy, the political history of India centres round the Rajputs. One clan founded the kingdom of Gujarat, another held Malwa, another (the Chauhans) founded a kingdom of which Ajmer was the capital, and so on. Kanauj fell into the hands of the Rathors (c. 1040 A.D.) and the dynasty then founded by that branch of the Gaharwaras of Benares became one of the most famous in India. Later in the same century the Chauhans were united, and by

1168 one of them could boast that he had conquered all the country from the Vindhya to the Himalayas, including Delhi already a fortress a hundred years old. The son of this conqueror was Prithwi Raj, the champion of the Hindus against the Mahomedans. With his death in battle (1192) ended the golden age of the new civilization that had been evolved out of chaos; and of the greatness of that age there is a splendid memorial in the temples and forts of the Rajput states and in the two great philosophical systems of Sankaracharya (ninth century) and Ramanuja (twelfth century). The triumph of Hinduism had been achieved, it must be added, at the expense of Buddhism, which survived only in Magadha at the time of the Mahomedan conquest and speedily disappeared there before the new faith.

### Mahomedan India.

The wave of Mahomedan invaders that eventually swept over the country first touched India, in Sind, less than a hundred years after the death of the Prophet in 632. But the first real contact was in the tenth century when a Turkish slave of a Persian ruler founded a kingdom at Ghazni, between Kabul and Kandahar. A descendant of his, Mahmud (967-1030) made repeated raids into the heart of India, capturing places so far apart as Multan, Kanauj, Gwalior, and Somnath in Kathiawar, but permanently occupying only a part of the Punjab. Enduring Mahomedan rule was not established until the end of the twelfth century, by which time, from the little territory of Ghor, there had arisen one Mahomed Ghori capable of carving out a kingdom stretching from Peshawar to the Bay of Bengal. Prithwi Raj, the Chauhan ruler of Delhi and Ajmer, made a brave stand against, and once defeated, one of the armies of this ruler, but was himself defeated in the following year. Mahomed Ghori was murdered at Lahore (1206) and his vast kingdom, which had been governed by satraps, was split up into what were practically independent sovereignties. Of these satraps, Qutb-ud-din, the slave ruler of Delhi and Lahore, was the most famous, and is remembered by the great mosque he built near the modern Delhi. Between his rule and that of the Mughals, which began in 1526, only a few of the many Kings who governed and fought and built beautiful buildings, stand out with distinction. One of these was Ala-ud-din (1296-1316), whose many expeditions to the south much weakened the Hindu Kings, and who proved himself to be a capable administrator. Another was Firoz Shah, of the house of Tughlaq, whose administration was in many respects admirable, but which ended, on his abdication, in confusion. In the reign of his successor, Mahmud (1398-1413), the kingdom of Delhi went to pieces and India was for seven months at the mercy of the Turkish conqueror Taimur. It was the end of the fifteenth century before the kingdom, under Sikandar Lodi, began to recover. His son, Ibrahim, still further extended the kingdom that had been recreated, but was defeated by Babar, King of Kabul, at Panipat, near Delhi, in 1526, and there was then established in India the Mughal dynasty.

The Mahomedan dynasties that had ruled in capitals other than Delhi up to this date

were of comparative unimportance, though some great men appeared among them. In Gujarat, for example, Ahmad Shah, the founder of Ahmedabad, showed himself a good ruler and builder as well as a good soldier, though his grandson, Mahmud Shah Begara, was a greater ruler—acquiring fame at sea as well as on land. In the South various kings of the Bahmani dynasty made names for themselves, especially in the long wars they waged on the new Hindu kingdom that had arisen which had its capital at Vijayanagar. Of importance also was Adil Khan, a Turk, who founded (1490) the Bijapur dynasty of Adil Shahis. It was one of his successors who crushed the Vijayanagar dynasty, and built the great mosque for which Bijapur is famous.

### The Mughal Empire.

As one draws near to modern times it becomes impossible to present anything like a coherent and consecutive account of the growth of India as a whole. Detached threads in the story have to be picked up one by one and followed to their ending, and although the sixteenth century saw the first European settlements in India, it will be convenient here to continue the narrative of Mahomedan India almost to the end of the Mughal Empire. How Babar entered Delhi has already been told. His son, Humayun, greatly extended his kingdom, but was eventually defeated (1540) and driven into exile by Sher Khan, an Afghan of great capabilities, whose short reign ended in 1545. The Sur dynasty thus founded by Sher Khan lasted another ten years when Humayun having snatched Kabul from one of his brothers, was strong enough to win back part of his old kingdom. When Humayun died (1556) his eldest son, Akbar, was only 13 years old and was confronted by many rivals. Nor was Akbar well served, but his career of conquest was almost uninterrupted and by 1594 the whole of India North of the Nerbudda had bowed to his authority, and he subsequently entered the Deccan and captured Ahmednagar. This great ruler, who was as remarkable for his religious tolerance as for his military prowess, died in 1605, leaving behind him a record that has been surpassed by few. His son, Jehangir, who married the Persian lady Nur Jahan, ruled until 1627, bequeathing to an admiring posterity some notable buildings—the tomb of his father at Sikandra, part of the palace at Agra, and the palace and fortress of Lahore. His son, Shahjahan, was for many years occupied with wars in the Deccan, but found time to make his court of incredible magnificence and to build the most famous and beautiful of all tombs, the Taj Mahal, as well as the fort, palace and Juma Masjid at Delhi. The quarrels of his sons led to the deposition of Shahjahan by one of them, Aurangzeb, in 1658. This Emperor's rule was one of constant intrigue and fighting in every direction, the most important of his wars being a twenty-five years' struggle against the Marathas of the Deccan who, under the leadership of Shivaji, became a very powerful faction in Indian politics. His bigoted attitude towards Hinduism made Aurangzeb all the more anxious to establish his Empire on a firm basis in the south, but he was unable to hold his many conquests, and on his death (1707) the

Empire, for which his three sons were fighting, could not be held together. Internal disorder and Maratha encroachments continued during the reigns of his successors, and in 1739 a fresh danger appeared in the person of Nadir Shah, the Persian conqueror, who carried all before him. On his withdrawal, leaving Mahomed Shah on the throne, the old intrigues recommenced and the Marathas began to make the most of the opportunity offered to them by puppet rulers at Delhi and by almost universal discord throughout what had been the Mughal Empire. There is little to add to the history of Mahomedan India. Emperors continued to reign in name at Delhi up to the middle of the 19th century, but their territory and power had long since disappeared, being swallowed up either by the Marathas or by the British.

### European Settlements.

The voyage of Vasco da Gama to India in 1498 was what turned the thoughts of the Portuguese to the formation of a great Empire in the East. That idea was soon realized, for, from 1500 onwards, constant expeditions were sent to India and the first two Viceroy's in India—Almeida and Albuquerque—laid the foundations of a great Empire and of a great trade monopoly. Goa, taken in 1510, became the capital of Portuguese India and remains to this day in the hands of its captors, and the countless ruins of churches and forts on the shores of Western India, as also farther East at Malacca, testify to the zeal with which the Portuguese endeavoured to propagate their religion and to the care they took to defend their settlements. There were great soldiers and great missionaries among them—Albuquerque, da Cunha, da Castro in the former class, St. Francis Xavier in the latter. But the glory of Empire loses something of its lustre when it has to be paid for, and the constant drain of men and money from Portugal, necessitated by the attacks made on their possessions in India and Malaya, was found almost intolerable. The junction of Portugal with Spain, which lasted from 1580 to 1640, also tended to the downfall of the Eastern Empire and when Portugal became independent again, it was unequal to the task of competing in the East with the Dutch and English. The Dutch had little difficulty in wresting the greater part of their territory from the Portuguese, but the seventeenth century naval wars with England forced them to relax their hold upon the coast of India, and during the French wars between 1795 and 1811 England took all Holland's Eastern possessions, and the Dutch have left in India but few traces of their civilisation and of the once powerful East India Company of the Netherlands.

The first English attempts to reach India date from 1498 when Cabot tried to find the North-West passage, and these attempts were repeated all through the sixteenth century. The first Englishman to land in India is said to have been one Thomas Stephens (1579) who was followed by a number of merchant adventurers, but trade between the two countries really dates from 1600 when Elizabeth incorporated the East India Company which had been formed in London. Factories in India were founded only after Portuguese and Dutch opposition had been overcome, notably in the

sea fight off Swally (Suvali) in 1612. The first factory, at Surat, was for many years the most important English foothold in the East. Its establishment was followed by others, including Fort St. George, Madras, (1640) and Hughli (1651). In the history of these early years of British enterprise in India the cession of Bombay (1661) as part of the dowry of Catherine of Braganza stands out as a landmark. It also illustrates the weakness of the Portuguese at that date, since in return the King of England undertook to protect the Portuguese in India against their foes—the Marathas and the Dutch. Cromwell, by his treaty of 1654, had already obtained from the Portuguese an acknowledgment of England's right to trade in the East; and that right was now threatened, not by the Portuguese, but by Sivali and by the general disorder prevalent in India. Accordingly, in 1686, the Company turned its attention to acquiring territorial power, and announced its intention to establish such a policy of civil and military power, and create and secure such a large revenue.....as may be the foundation of a large, well-grounded, sure English dominion in India for all time to come. Not much came of this announcement for some time, and no stand could be made in Bengal against the depredations of Aurangzeb. The foundations of Calcutta (1690) could not be laid by Job Charnock until after a humiliating peace had been concluded with that Emperor, and, owing to the difficulties in which the Company found itself in England, there was little chance of any immediate change for the better. The union of the old East India Company with the new one which had been formed in rivalry to it took place in 1708, and for some years peaceful development followed; though Bombay was always exposed by sea to attacks from the pirates, who had many strongholds within easy reach of that port, and on land to attacks from the Marathas. The latter danger was felt also in Calcutta. Internal dangers were numerous and still more to be feared. More than one mutiny took place among the troops sent out from England, and rebellions like that led by Keigwin in Bombay threatened to stifle the infant settlements. The public health was bad and the rate of mortality was at times appalling. To cope with such conditions strong men were needed, and the Company was in this respect peculiarly fortunate; the long list of its servants, from Oxenden and Aungler to Hastings and Raffles, contains many names of men who proved themselves good rulers and far-sighted statesmen, the finest Empire-builders the world has known.

Attempts to compete with the English were made of course. But the schemes of the Emperor Charles VI to secure a share of the Indian trade were not much more successful than those made by Scotland, Denmark, Sweden, and Russia. By the French, who founded Pondicherry and Chandernagore towards the end of the 17th century, much more was achieved, as will be seen from the following outline of the development of British rule.

### The French Wars.

When war broke out between England and France in 1744, the French had acquired a



strong position in Southern India, which had become independent of Delhi and was divided into three large States—Hyderabad, Tanjore, and Mysore—and a number of petty states under local chieftains. In the affairs of these States Dupleix, when Governor of Pondicherry, had intervened with success, and when Madras was captured by a French squadron, under La Bourdonnais (1746) Dupleix wished to hand it over to the Nawab of Arcot—a deputy of the Nizam's who ruled in the Carnatic. The French, however, kept Madras, repelling an attack by the disappointed Nawab as well as the British attempts to recapture it. The treaty of Aix-la-Chapelle restored Madras to the English. The fighting had shown the Indian powers the value of European troops, and this was again shown in the next French war (1750-54) when Clive achieved enduring fame by his capture and subsequent defence of Arcot. This war arose from Dupleix supporting candidates for the disputed successions at Arcot and Hyderabad while the English at Madras put forward their own nominees. One of Dupleix's officers, the Marquis de Bussy, persuaded the Nizam to take into his pay the army which had established his power, and in return the Northern Circars, between Orisa and Madras, was granted to the French. This territory, however, was captured by the English in the seven years' war (1756-63). Dupleix had by then been recalled to France. Lally, who had been sent to drive the English out of India, captured Fort St. David and invested Madras. But the victory which Colonel (Sir Eyre) Coote won at Wandiwash (1760) and the surrender of Pondicherry and Gingee put an end to the French ambitions of Empire in Southern India. Pondicherry passed more than once from the one nation to the other before settling down to its present existence as a French colony in miniature.

### **Battle of Plassey.**

While the English were fighting the third French war in the South they became involved in grave difficulties in Bengal, where Siraj-ud-Daula had acceded to power. The headquarters of the English at Calcutta were threatened by that ruler who demanded they should surrender a refuge and should cease building fortifications. They refused and he marched against them with a large army. Some of the English took to their ships and made off down the river, the rest surrendered and were cast into the jail known as the "Black Hole." From this small and stifling room 23 persons, out of 146, came out alive the next day. Clive who was at Madras, immediately sailed for Calcutta with Admiral Watson's squadron, recaptured the town (1757), and, as war with the French had been proclaimed, proceeded to take Chandernagore. The Nawab Siraj-ud-Daula then took the side of the French, and Clive, putting forward Mir Jafar as candidate for the Nawab's throne, marched out with an army consisting of 900 Europeans, 2,000 sepoys and 8 pieces of artillery against the Nawab's host of over 80,000. The result was the historic battle of Plassey (June 23) in which Clive, after hesitating on the course to be pursued, routed the Nawab. Mir Jafar was put on the throne

at Murshidabad, and the price of this honour was put at £ 2,340,000 in addition to the grant to the Company of the land round Calcutta now known as the District of the twenty-four Parganas. In the year after Plassey, Clive was appointed Governor of Bengal and in that capacity sent troops against the French in Madras and in person led a force against the Oudh army that was threatening Mir Jafar, in each case with success. From 1760 to 1765 Clive was in England. During his absence the Council at Calcutta deposed Mir Jafar and, for a price, put Mir Kasim in his place. This ruler moved his capital to Monghyr, organized an army, and began to intrigue with the Nawab Wazir of Oudh. He soon found, in a dispute over customs dues, an opportunity of quarrelling with the English and the first shots fired by his followers were the signal for a general rising in Bengal. About 200 Englishmen and a number of sepoys were massacred, but his trained regiments were defeated at Gheria and Odeynullah, and Mir Kasim sought protection from the Nawab of Oudh. But in 1764, after quelling a sepoy mutiny in his own camp by blowing 24 ring-leaders from the guns, Major (Sir Hector) Munro defeated the joint forces of Shah Alam, the Mughal Emperor, and the Nawab of Oudh in the battle of Buxar. In 1765 Clive (now Baron Clive of Plassey) returned as Governor. "Two landmarks stand out in his policy. First, he sought the substance, although not the name, of territorial power, under the fiction of a grant from the Mughal Emperor. Second, he desired to purify the Company's service, by prohibiting illicit gains, and by guaranteeing a reasonable pay from honest sources. In neither respect were his plans carried out by his immediate successors. But our efforts towards a sound administration date from this second Governorship of Clive, as our military supremacy dates from his victory at Plassey." Before Clive left India, in 1767, he had readjusted the divisions of Northern India and had set up a system of Government in Bengal by which the English received the revenues and maintained the army while the criminal jurisdiction was vested in the Nawab. The performance of his second task, the purification of the Company's service, was hotly opposed but carried out. He died in 1774 by his own hand, the House of Commons having in the previous year censured him, though admitting that he did render "great and meritorious services to his country."

### **Warren Hastings.**

The dual system of government that Clive had set up proved a failure and Warren Hastings was appointed Governor, in 1772, to carry out the reforms settled by the Court of Directors which were to give them the entire care and administration of the revenues. Thus Hastings had to undertake the administrative organization of India, and, in spite of the factious attitude of Philip Francis, with whom he fought a duel and of other members of his Council, he reorganized the civil service, reformed the system of revenue collection, greatly improved the financial position of the Company, and created courts of justice and some semblance of a police force. From 1772 to 1774 he was Governor of Bengal, and from 1774 to 1775

he was the first Governor-General, nominated under an Act of Parliament passed in the previous year. His financial reforms, and the forced contributions he enacted from the rebellious Chet Singh and the Begam of Oudh, were interpreted in England as acts of oppression and formed, together with his action in the trial of Nuncumar for forgery, the basis of his seven years' trial before the House of Lords which ended in a verdict of not guilty on all the charges. But there is much more for which his administration is justly famous. The recovery of the Marathas from their defeat at Panipat was the cardinal factor that influenced his policy towards the native states. One frontier was closed against Maratha invasion by the loan of a British brigade to the Nawab Wazir of Oudh, for his war against the Rohillas, who were intriguing with the Marathas. In Western India he found himself committed to the two Maratha wars (1775-82) owing to the ambition of the Bombay Government to place its own nominee on the throne of the Peshwa at Poona, and the Bengal troops that he sent over made amends, by the conquest of Gujrat and the capture of Gwalior, for the disgrace of Wadgaon where the Marathas overpowered a Bombay army. In the South—where interference from Madras had already led (1769) to what is known as the first Mysore war, a disastrous campaign against Hyder Ali and the Nizam—he found the Madras Government again in conflict with those two potentates. The Nizam he won over by diplomacy, but against Hyder Ali he had to despatch a Bengal army under Sir Eyre Coote. Hyder Ali died in 1782 and two years later a treaty was made with his son Tipu. It was in these acts of intervention in distant provinces that Hastings showed to best advantage as a great and courageous man, cautious, but swift in action when required. He was succeeded, after an interregnum, by Lord Cornwallis (1786-93) who built on the foundations of civil administration laid by Hastings, by entrusting criminal jurisdiction to Europeans and establishing an Appellate Court of Criminal Judicature at Calcutta. In the Civil Service he separated the functions of the District Collector and Judge and organized the "writers" and "merchants" of the Company into an administrative Civil Service. This system was subsequently extended to Madras and Bombay. Lord Cornwallis is better known for his introduction, on orders from England, of the Permanent Settlement in Bengal. (See article on Land Revenue). A third Mysore war was waged during his tenure of office which ended in the submission of Tipu Sultan. Sir John Shore (Lord Teignmouth), an experienced Civil Servant, succeeded Lord Cornwallis, and, in 1798, was followed by Lord Wellesley, the friend of Pitt, whose projects were to change the map of India.

#### Lord Wellesley's Policy.

The French in general, and "the Corsican" in particular, were the enemy most to be dreaded for a few years before Lord Wellesley took up his duties in India, and he formed the scheme of definitively ending French schemes in Asia by placing himself at the head of a great Indian confederacy. He started by obtaining from the Nawab of Oudh the cession of

large tracts of territory in lieu of payments overdue as subsidies for British troops, he then won over the Nizam to the British side, and, after exposing the intrigues of Tipu Sultan with the French, embarked on the fourth Mysore war which ended (1799) in the fall of Seringapatam and the gallant death of Tipu. Part of Mysore, the Carnatic, and Tanjore roughly constituting the Madras Presidency of to-day then passed to British rule. The five Maratha powers—the Peshwa of Poona, the Gaekwar of Baroda, Sindhia of Gwalior, Holkar of Indore and the Raja of Nagpur—had still to be brought into the British net. The Peshwa, after being defeated by Holkar, fled to British territory and signed the Treaty of Bassin which led to the third Maratha war (1802-04) as it was regarded by Sindhia and the Raja of Nagpur as a betrayal of Maratha independence. In this, the most successful of British campaigns in India, Sir Arthur Wellesley (the Duke of Wellington) and General (Lord) Lake carried all before them, the one by his victories at Assaye and Argaum and the other at Aligarh and Laswari. Later operations, such as Colonel Monson's retreat through Central India, were less fortunate. The great acquisitions of territory made under Lord Wellesley proved so expensive that the Court of Directors, becoming impatient, sent out Lord Cornwallis a second time to make peace at any price. He, however, died soon after his arrival in India, and Sir George Barlow carried on the government (1805-7) until the arrival of a stronger ruler, Lord Minto. He managed to keep the peace in India for six years, and to add to British dominions by the conquest of Java and Mauritius. His foreign policy was marked by another new departure, inasmuch as he opened relations with the Punjab, Persia, and Afghanistan, and concluded a treaty with Ranjit Singh, at Lahore, which made that Sikh ruler the loyal ally of the British for life.

The successor of Lord Minto was Lord Moira, who found himself obliged almost at once to declare war on the Gurkhas of Nepal, who had been encroaching on British territory. After initial reverses, the English, under General Ochterlony, were successful and the Treaty of Sagauli (1816) was drawn up which defines British relations with Nepal to the present day. For this success Lord Moira was made Marquis of Hastings. In the same year he made preparations for the last Maratha war (1817-18) which was made necessary by the lawless conduct of the Pindaris, gangs of Pathan or Bohilla origin, whose chief patrons were the rulers of Native States. The large number of 120,000 that he collected for this purpose destroyed the Pindaris, annexed the dominions of the rebellious Peshwa of Poona, protected the Rajput States, made Sindhia enter upon a new treaty, and compelled Holkar to give up part of his territory. Thus Lord Hastings established the British power more firmly than ever, and when he resigned, in 1823, all the Native States outside the Punjab had become parts of the political system and British interests were permanently secured from the Persian Gulf to Singapore. Lord Amherst followed Lord Hastings, and his five years' rule (1823-28) are memorable for the first Burmese war and the capture of Bharatpur. The former opera-

tion was undertaken owing to the insolent demands and raids of the Burmese, and resulted in the Burmese ceding Assam, Aracan, and the coast of Martaban and their claims to the lower provinces. The capture of Bharatpur by Lord Combermere (1826) wiped out the repulse which General Lake had received there twenty years earlier. A disputed succession on this occasion led to the British intervention.

### Social Reform.

A former Governor of Madras, Lord William Bentinck, was the next Governor-General. His epitaph by Macaulay, says: "He abolished cruel rites; he effaced humiliating distinctions; he gave liberty to the expression of public opinion; his constant study was to elevate the intellectual and moral character of the nations committed to his charge."

Some of his financial reforms, forced on him from England, and his widening of the gates by which educated Indians could enter the service of the Company, were most unpopular at the time, but were eclipsed by the acts he took for the abolition of *Sati*, or widow-burning, and the suppression—with the help of Captain Sleeman—of the professional hereditary assassins known as *Thugs*. In 1832 he annexed Cutch, and, two years later, Coorg. The incompetence of the ruler of Mysore forced him to take that State also under British administration—where it remained until 1881. His rule was marked in other ways by the despatch of the first steamship that made the passage from Bombay to Suez, and by his settlement of the long educational controversy in favour of the advocates of instruction in English and the vernaculars. Lord William Bentinck left India (1835) with his programme of reforms unfinished. The new Charter Act of 1833 had brought to a close the commercial business of the Company and emphasized their position as rulers of an Indian Empire in trust for the Crown. By it the whole administration, as well as the legislation of the country, was placed in the hands of the Governor-General in Council, and authority was given to create a Presidency of Agra. Before his retirement Bentinck assumed the statutory title of Governor-General of India (1834), thus marking the progress of consolidation since Warren Hastings in 1774 became the first Governor-General of Fort William. Sir Charles Metcalfe, being senior member of Council, succeeded Lord William Bentinck, and during his short tenure of office carried into execution his predecessor's measures for giving entire liberty to the press.

### Afghan Wars.

With the appointment of Lord Auckland as Governor-General (1836-42) there began a new era of war and conquest. Before leaving London he announced that he looked with exultation to the prospect of "promoting education and knowledge, and of extending the blessings of good Government and happiness to millions in India;" but his administration was almost exclusively comprised in a fatal expedition to Afghanistan, which dragged in its train the annexation of Sind, the Sikh wars, and the inclusion of Baluchistan in the protectorate of India. The first Afghan war was undertaken partly to counter the Russian advance

in Central Asia and partly to place on the throne at Kabul the dethroned ruler Shah Shuja in place of Dost Mahomed. The latter object was easily attained (1839) and for two years Afghanistan remained in the military occupation of the British. In 1841 Sir Alexander Burnes was assassinated in Kabul and Sir William Macnaghten suffered the same fate in an interview with the son of Dost Mahomed. The British Commander in Kabul, Gen. Elphinstone, was old and feeble, and after two months' delay he led his army of 4,500 and 12,000 camp followers back towards India in the depth of winter. Between Kabul and Jallalabad the whole force perished, either at the hands of the Afghans or from cold, and Dr. Brydon was the only survivor who reached the latter city. Lord Ellenborough succeeded Lord Auckland and was persuaded to send an army of retribution to relieve Jallalabad. One force under Gen. Pollock relieved Jallalabad and marched on Kabul, while Gen. Nott, advancing from Kandahar, captured Ghazni and joined Pollock at Kabul (1842). The bazaar at Kabul was blown up, the prisoners rescued, and the army returned to India leaving Dost Mahomed to take undisputed possession of his throne. The drama ended with a bombastic proclamation from Lord Ellenborough and the parade through the Punjab of the (spurious) gates of Somnath taken from the tomb of Mahmud of Ghazni.

### Sikh Wars.

Lord Ellenborough's other wars—the conquest of Sind by Sir Charles Napier and the suppression of an outbreak in Gwalior—were followed by his recall, and the appointment of Sir Henry (1st Lord) Hardinge to be Governor-General. A soldier Governor-General was not unacceptable, for it was felt that a trial of strength was imminent between the British and the remaining Hindu power in India, the Sikhs. Ranjit Singh, the founder of the Sikh Kingdom, had died in 1839, loyal to the end to the treaty he had made with Metcalfe thirty years earlier. He left no son capable of ruling, and the *Khalsa*, or central council of the Sikh army, was burning to measure its strength with the British sepoy. The intrigues of two men, Lal Singh and Fej Singh, to obtain the supreme power led to their crossing the Sutlej and invading British territory. Sir Hugh Gough, the Commander-in-Chief, and the Governor-General hurried to the frontier, and within three weeks four pitched battles were fought—at Mudki, Ferozeshah, Aliwal and Sohraon. The Sikhs were driven across the Sutlej and Lahore surrendered to the British, but the province was not annexed. By the terms of peace the infant Duleep Singh was recognized as Rajah; Major Henry Lawrence was appointed Resident, to assist the Sikh Council or Regency, at Lahore; the Jullundur Doab was added to British territory; the Sikh army was limited; and a British force was sent to garrison the Punjab on behalf of the child Rajah. Lord Hardinge returned to England (1848) and was succeeded by Lord Dalhousie, the greatest of Indian proconsuls.

Dalhousie had only been in India a few months when the second Sikh war broke out. In the attack on the Sikh position at Chillianwala the British lost 2,400 officers and men

besides four guns and the colours of three regiments; but before reinforcements could arrive from England, bringing Sir Charles Napier as Commander-in-Chief, Lord Gough had restored his reputation by the victory of Gujrat which absolutely destroyed the Sikh army. As a consequence the Punjab was annexed and became a British province (1849), its pacification being so well carried out, under the two Lawrences that on the outbreak of the Mutiny eight years later it remained not only quiet but loyal. In 1852 Lord Dalhousie had again to embark on war, this time in Burma, owing to the ill-treatment of British merchants in Rangoon. The lower valley of the Irawaddy was occupied from Rangoon to Prome and annexed, under the name of Pegu, to those provinces that had been acquired in the first Burmese war. British territories were enlarged in many other directions during Lord Dalhousie's tenure of office. His "doctrine of lapse" by which British rule was substituted for Indian in States where continued misrule on the failure of a dynasty made this change possible, came into practice in the cases of Satara, Jhansi, and Nagpur (which last named State became the Central Provinces) where the rulers died without leaving male heirs. Oudh was annexed on account of its misrule. Dalhousie left many other marks on India. He reformed the administration from top to bottom, founded the Public Works Department, initiated the railways, telegraphs and postal system, and completed the great Ganges canal. He also detached the Government of Bengal from the charge of the Governor-General, and summoned representatives of the local Governments to the deliberations of the Government of India. Finally, in education he laid down the lines of a department of public instruction and initiated more practical measures than those devised by his predecessors. It was his misfortune that the mutiny, which so swiftly followed his resignation, was by many critics in England attributed to his passion for change.

### The Sepoy Mutiny.

Dalhousie was succeeded by Lord Canning in 1856, and in the following year the sepoys of the Bengal army mutinied and all the valley of the Ganges from Delhi to Patna rose in rebellion. The causes of this convulsion are difficult to estimate, but are probably to be found in the unrest which followed the progress of English civilisation, in the spreading of false rumours that the whole of India was to be subdued, in the confidence the sepoy troops had acquired in themselves under British leadership, and in the ambition of the educated classes to take a greater share in the government of the country. Added to this, there was in the deposed King of Delhi, Bahadur Shah, a centre of growing disaffection. Finally there was the story—not devoid of truth—that the cartridges for the new Enfield rifle were greased with fat that rendered them unclean for both Hindus and Mahomedans. And when the mutiny did break out it found the Army without many of its best officers who were employed in civil work, and the British troops reduced, in spite of Lord Dalhousie's warnings, below the number he considered essential for safety. On May 10

the sepoys at Meerut rose in mutiny, cut down a few Europeans, and, unchecked by the large European garrison, went off to Delhi where next morning the Mahomedans rose. From that centre the mutiny spread through the North-Western Provinces and Oudh into Lower Bengal. Risings in the Punjab were put down by Sir John Lawrence and his subordinates, who armed the Sikhs, and with their help reduced the sepoys, and Lawrence was subsequently able to send a strong body of Sikhs to aid in the siege of Delhi. The native armies of Madras and Bombay remained for the most part true to their colours. In Central India, the contingents of some of the great chiefs joined the rebels, but Hyderabad was kept loyal by the influence of its minister, Sir Salar Jung.

The interest of the war centres round Delhi, Cawnpore and Lucknow, though in other places massacres and fighting occurred. The siege of Delhi began on June 8 when Sir Henry Barnard occupied the Ridge outside the town. Barnard died of cholera early in July, and Thomas Reed, who took his place, was obliged through illness to hand over the command to Archdale Wilson. In August Nicholson arrived with a reinforcement from the Punjab. In the meantime the rebel force in Delhi was constantly added to by the arrival of new bodies of mutineers, attacks were frequent and the losses heavy. Cholera and sunstroke carried off many victims on the Ridge, and when the final assault was made in September the Delhi army could only parade 4,720 infantry, of whom 1,960 were Europeans. The arrival of siege guns made it possible to advance the batteries on September 8, and by the 13th a breach was made. On the following day three columns were led to the assault, a fourth being held in reserve. Over the ruins of the Kashmir Gate, blown in by Horne and Salkeld, Col. Crampbell led his men and Nicholson formed up his troops within the walls. By nightfall the British, with a loss of nearly 1,200 killed and wounded, had only secured a foothold in the city. Six days' street fighting followed and Delhi was won, but the gallant Nicholson was killed at the head of a storming party. Bahadur Shah was taken prisoner, and his two sons were shot by Captain Hudson.

### Massacre at Cawnpore.

At Cawnpore the sepoys mutinied on June 27 and found in Nana Sahib, the heir of the last Peshwa, a willing leader in spite of his former professions of loyalty. There a European force of 240 with six guns had to protect 870 non-combatants, and held out for 22 days, surrendering only on the guarantee of the Nana that they should have a safe conduct as far as Allahabad. They were embarking on the boats on the Ganges when fire was opened on them, the men being shot or hacked to pieces before the eyes of their wives and children and the women being mutilated and murdered in Cawnpore to which place they were taken back. Their bodies were thrown down a well just before Havelock, having defeated the Nana's forces, arrived to the relief. In Lucknow a small garrison held out in the Residency from July 2 to September 25 against tremendous odds and enduring the most fearful hardships. The relieving force, under Havelock and Outram, was itself invested, and the garrison was

not finally delivered until Sir Colin Campbell arrived in November. Fighting continued for 18 months in Oudh, which Sir Colin Campbell finally reduced, and in Central India, where Sir Hugh Rose waged a brilliant campaign against the disinherited Rani of Jhansi—who died at the head of her troops—and Tantia Topi

### Transfer to the Crown.

With the end of the mutiny there began a new era in India, strikingly marked at the outset by the Act for the Better Government of India (1858) which transferred the entire administration from the Company to the Crown. By that Act India was to be governed by, and in the name of, the Sovereign through a Secretary of State, assisted by a Council of fifteen members. At the same time the Governor-General received the title of Viceroy. The European troops of the Company, numbering about 24,000 officers and men were—greatly resenting the transfer—amalgamated with the Royal service, and the Indian Navy was abolished. On November 1, 1858, the Viceroy announced in Durbar at Allahabad that Queen Victoria had assumed the government of India, and proclaimed a policy of justice and religious toleration. A principle already enunciated in the Charter Act of 1833 was reinforced, and all, of every race or creed, were to be admitted as far as possible to those offices in the Queen's service for which they might be qualified. The aim of the Government was to be the benefit of all her subjects in India—"In their prosperity will be our strength, in their contentment our security, and in their gratitude our best reward." Peace was proclaimed in July 1859, and in the cold weather Lord Canning went on tour in the northern provinces, to receive the homage of loyal chiefs and to assure them that the "policy of lapse" was at an end. A number of other important reforms marked the closing years of Canning's Viceroyalty. The India Councils Act (1861) augmented the Governor-General's Council, and the Councils of Madras and Bombay by adding non-official members, European and Indian, for legislative purposes only. By another Act of the same year High Courts of Judicature were constituted. To deal with the increased debt of India, Mr. James Wilson was sent from England to be Financial Member of Council, and to him are due the customs system, income tax, license duty, and State paper currency. The cares of office had broken down the Viceroy's health. Lady Canning died in 1862 and this hastened his departure for England where he died in June of that year. His successor, Lord Elgin, lived only a few months after his arrival in India, and was succeeded by Sir John (afterwards Lord) Lawrence, the "saviour of the Punjab."

### Sir John Lawrence.

The chief task that fell to Sir John Lawrence was that of reorganising the Indian military system, and of reconstructing the Indian army. The latter task was carried out on the principle that in the Bengal army the proportion of Europeans to Indians in the infantry and cavalry should be one to two, and in the Madras and Bombay armies one to three: the artillery was to be almost wholly European.

The re-organisation was carried out in spite of financial difficulties and the saddling of Indian revenues with the cost of a war in Abyssinia with which India had no direct concern; but operations in Bhutan were all the drain made on the army in India while the re-organising process was being carried on. Two severe famines—in Orissa (1866) and Bundelkhand and Upper Hindustan (1868-9)—occurred, while Sir John Lawrence was Viceroy, and he laid down the principle for the first time in Indian history, that the officers of the Government would be held personally responsible for taking every possible means to avert death by starvation. He also created the Irrigation Department under Col. (Sir Richard) Strachey. Two commercial crises of the time have to be noted. One seriously threatened the tea industry in Bengal. The other was the consequence of the wild gambling in shares of every description that took place in Bombay during the years of prosperity for the Indian cotton industry caused by the American Civil War. The "Share Mania," however, did no permanent harm to the trade of Bombay, but was, on the other hand, largely responsible for the series of splendid buildings begun in that city during the Governorship of Sir Bartle Frere. Sir John Lawrence retired in 1869, having passed through every grade of the service, from an Assistant Magistracy to the Viceroyalty. Lord Mayo, who succeeded him, created an Agricultural Department and introduced the system of Provincial Finance, thus fostering the impulse to local self-government. He also laid the foundation for the reform of the salt duties, thereby enabling his successors to abolish the inter-provincial customs lines. Unhappily his vast schemes for the development of the country by extending communications of every kind were not carried out to the full by him, for he was murdered in the convict settlement of the Andaman Islands, in 1872. Lord Northbrook (Viceroy 1872-6) had to exercise his abilities chiefly in the province of finance. A severe famine which threatened Lower Bengal in 1874 was successfully warded off by the organization of State relief and the importation of rice from Burma. The following year was notable for the deposition of the Gaikwar of Baroda for misgovernment, and for the tour through India of the Prince of Wales (the late King Edward VII). The visit of the Duke of Edinburgh to India when Lord Mayo was Viceroy had given great pleasure to those with whom he had come in touch, and had established a kind of personal link between India and the Crown. The Prince of Wales' tour aroused unprecedented enthusiasm for and loyalty to the British Raj, and further encouragement was given to the growth of this spirit when, in a durbar of great magnificence held on January 1st, 1877, on the famous Ridge at Delhi, Queen Victoria was proclaimed Empress of India. The Viceroy of that time, Lord Lytton, had, however, to deal with a situation of unusual difficulty. Two successive years of drought produced, in 1877-78, the worst famine India had known. The most strenuous exertions were made to mitigate its effects, and eight crores of rupees were spent in importing grain; but the loss of life was estimated at 6½ millions. At this time also Afghan affairs once more became prominent.

### Second Afghan War.

The Amir, Sher Ali, was found to be intriguing with Russia and that fact, coupled with his repulse of a British mission led to the second Afghan War. The British forces advanced by three routes—the Khyber, the Kurram, and the Bolan—and gained all the important vantage points of Eastern Afghanistan. Sher Ali fled and a treaty was made with his son Yakub Khan, which was promptly broken by the murder of Sir Louis Cavagnari, who had been sent as English envoy to Kabul. Further operations were thus necessary, and Sir F. (now Lord) Roberts advanced on the capital and defeated the Afghans at Charasia. A rising of the tribes followed, in spite of Sir D. Stewart's victory at Ahmed Kheyl and his advance from Kabul to Kandahar. A pretender, Sirdar Ayub Khan, from Herat prevented the establishment of peace, defeated Gen. Burrows' brigade at Malwand, and invested Kandahar. He was routed in turn by Sir F. Roberts who made a brilliant march from Kabul to Kandahar. After the British withdrawal fighting continued between Ayub Khan and Abdur Rahman, but the latter was left undisputed Amir of Afghanistan until his death in 1901.

In the meantime Lord Lytton had resigned (1880) and Lord Ripon was appointed Viceroy by the new Liberal Government. Lord Ripon's administration is memorable for the freedom given to the Press by the repeal of the Vernacular Press Act, for his scheme of local self-government which developed municipal institutions, and for the attempt to extend the jurisdiction of the criminal courts in the Districts over European British subjects, independently of the race or nationality of the presiding judge. This attempt, which created a feeling among Europeans in India of great hostility to the Viceroy, ended in a compromise in 1884. Other reforms were the reestablishment of the Department of Revenue and Agriculture, the appointment of an Education Commission with a view to the spread of popular instruction on a broader basis, and the abolition by the Finance Minister (Sir Evelyn Baring, now Lord Cromer) of a number of customs duties. Lord Dufferin, who succeeded Lord Ripon in 1884, had to give his attention more to external than internal affairs: one of his first acts was to hold a durbar at Rawalpindi for the reception of the Amir of Afghanistan which resulted in the strengthening of British relations with that ruler. In 1885 a third Burmese war became necessary owing to the truculent attitude of King Thibaw and his intrigues with foreign Powers. The expedition, under General Prendergast, occupied Mandalay without difficulty and King Thibaw was exiled to Ratnagiri, where he died on 16th December 1916. His dominions of Upper Burma were annexed to British India on the first of January, 1886.

### The Russian Menace.

Of greater importance at the time were the measures taken to meet a possible, and as it then appeared a probable, attack on India by Russia. These preparations, which cost over two million sterling, were hurried on because of a collision which occurred between Russian and Afghan troops at Penjdeh, during the delimitation of the Afghan frontier

towards Central Asia, and which seemed likely to lead to a declaration of war by Great Britain. War was averted, but the Penjdeh incident had called attention to a menace that was to be felt for nearly a generation more; it had also served to elicit from the Princes of India an unanimous offer of troops and money in case of need. That offer bore fruit under the next Viceroy, Lord Lansdowne, when the present system of Imperial Service Troops was organised. Under Lord Lansdowne's rule also the defences of the North-Western Frontier were strengthened, on the advice of Sir Frederick (now Earl) Roberts, who was then Commander-in-Chief in India. Another form of precautionary measure against the continued aggression of Russia was taken by raising the annual subsidy paid by the Indian Government to the Amir from eight to twelve lakhs.

On the North-Eastern frontier there occurred (1891) in the small State of Manipur a revolution against the Raja that necessitated an inquiry on the spot by Mr. Quinton, the Chief Commissioner of Assam. Mr. Quinton, the commander of his escort, and others, were treacherously murdered in a conference and the escort ignominiously retreated. This disgrace to British arms led to several attacks on frontier outposts which were brilliantly defeated. Manipur was occupied by British troops and the government of the State was reorganised under a Political Agent. Lord Lansdowne's term of office was distinguished by several other events, such as the passing of the Parliamentary Act (Lord Cross's Act, 1892), which increased the size of the Legislative Councils as well as the number of non-officials in them; legislation aimed at social and domestic reform among the Hindus; and the closing of the Indian Mints to the free coinage of silver (1893). In Burma great progress was made, under Sir Alexander Mackenzie, as Chief Commissioner: comparative order was established, and large schemes for the construction of railways, roads, and irrigation works were put in hand. (The Province was made a Lieutenant-Governorship in 1897).

### Frontier Campaigns.

Lord Elgin, who succeeded Lord Lansdowne in 1894, was confronted at the outset with a deficit of Rs. 2½ crores, due to the fall in exchange. (In 1895 the rupee fell as low as 1s. 1d.) To meet this the old five per cent. import duties were reimposed on a number of commodities, but not on cotton goods; and within the year the duty was extended to piece-goods, but not to yarn. The reorganisation of the Army, which involved the abolition of the old system of Presidency Armies, had hardly been carried out when a number of risings occurred along the North-West Frontier. In 1895 the British Agent in Chitral—which had come under British influence two years previously when Sir H. M. Durand had demarcated the southern and eastern boundaries of Afghanistan—was besieged and had to be rescued by an expeditionary force. Two years later the Wazirs, Swatis, and Mohmands attacked the British positions in Malakand, and the Afridis closed the Khyber Pass. Peace was only established after a prolonged campaign (the Tirah campaign) in which 40,000 troops were employed, and over 1,000 officer

and men had been lost. This was in itself a heavy burden on the finances of India, which was increased by the serious and widespread famine of 1896-97 and by the appearance in India of bubonic plague. The methods taken to prevent the spread of that disease led, in Bombay, to rioting, and elsewhere to the appearance in the vernacular press of seditious articles which made it necessary to make more stringent the law dealing with such writings.

### Lord Curzon's Viceroyalty.

With famine and plague Lord Curzon also, who succeeded Lord Elgin in 1899, had to deal. In 1901 the cycle of bad harvests came to an end; but plague increased, and in 1904 deaths from it were returned at over one million. Of the many problems to which Lord Curzon directed his attention, only a few can be mentioned here: some indeed claim that his greatest work in India was not to be found in any one department but was in fact the general gearing up of the administration which he achieved by his unceasing energy and personal example of strenuous work. He had at once to turn his attention to the North-West Frontier. The British garrisons beyond our boundary were gradually withdrawn and replaced by tribal levies, and British forces were concentrated in British territory behind them as support. An attempt was made to check the arms traffic and work on strategic railways was pushed forward. The fact that in seven years he only spent a quarter of a million upon repressive measures and only found it necessary to institute one blockade (against the Mahsud Waziris) is the justification of this policy of compromise between the Lawrence and Forward schools of thought. In 1901 the trans-Indus districts of the Punjab were separated from that Province, and together with the political charges of the Malakand, the Khyber, Kurram, Tochi, and Wana were formed into the new North-West Frontier Province, under a Chief Commissioner directly responsible to the Government of India. That year also witnessed the death of Abdur Rahman, the Amir of Afghanistan, and the establishment of an understanding with his successor Habibullah. In 1904 the attitude of the Dalai Lama of Tibet being pro-Russian and anti-British, it became necessary to send an expedition to Lhasa under Colonel (Sir Francis) Younghusband. The Dalai Lama abdicated and a treaty was concluded with his successor.

### Lord Curzon as Viceroy.

In his first year of office Lord Curzon passed the Act which, in accordance with the recommendations of the Fowler Commission, practically fixed the value of the rupee at 1s. 4d., and in 1900 a Gold Reserve fund was created. The educational reforms that marked this Viceroyalty are dealt with elsewhere: chief among them was the Act of 1904 reorganizing the governing bodies of Indian Universities. Under the head of agrarian reform must be mentioned the Punjab Land Alienation Act, designed to free the cultivators of the soil from the clutches of money-lenders, and the institution of Agricultural banks. The efficiency of the Army was increased (Lord Kitchener was Commander-in-Chief) by the re-armament of the Indian Army, the strengthening of the

artillery, and the reorganisation of the transport service. In his relations with the Feudatory Chiefs, Lord Curzon emphasized their position as partners in administration, and he founded the Imperial Cadet Corps to give a military education to the sons of ruling and aristocratic families. In 1902 the British Government obtained from the Nizam a perpetual lease of the Assigned Districts of Berar in return for an annual payment of 25 lakhs. The accession of King Edward VII was proclaimed in a splendid Durbar on January 1, 1903. In 1904 Lord Curzon returned to England for a few months but was re-appointed to a second term of office, Lord Amthill, Governor of Madras, having acted as Viceroy during his absence. The chief act of this second term was the partition of Bengal and the creation of a new Province of Eastern Bengal and Assam—a reform, designed to remove the systematic neglect of the trans-Gangetic areas of Bengal, which evoked bitter and prolonged criticism. In 1905 Lord Curzon resigned, being unable to accept the proposals of Lord Kitchener for the re-adjustment of relations between the Army headquarters and the Military Department of the Government, and being unable to obtain the support of the Home Government. He was succeeded by Lord Minto, the grandson of a former Governor-General. It was a stormy heritage to which Lord Minto succeeded, for the unrest which had long been noticed developed in one direction into open sedition. The occasion of the outburst in Bengal was the partition of that province. The causes of the flood of seditious writings and speeches, of the many attempts at assassination, and of the boycott of British goods are less easily definable. The mainspring of the unrest was "a deep-rooted antagonism to all the principles upon which Western society, especially in a democratic country like England, has been built up."

### Political Outrages.

Outside Bengal attempts to quell the disaffection by the ordinary law were fairly successful. But scarcely any province was free from disorder of some kind and, though recourse was had to the deportation of persons without reason assigned under an Act of 1818, special Acts had to be passed to meet the situation, viz.:—an Explosives Act, a Prevention of Seditious Meetings Act, and a Criminal Law Amendment Act which provides for a magisterial inquiry in private and a trial before three judges of the High Court without a jury. The need for this reinforcement of the law may be shown by a list of the principal political outrages in India while Lord Minto was Viceroy and subsequent to his departure:—

December, 1907.—Attempt to wreck the Lieutenant-Governor of Bengal's train at Naralingarh.

December, 1907.—Attempt on the life of Mr B. C. Allen at Goalundo.

March, 1908.—Second attempt to wreck Sir Andrew Fraser's train at Chandernagore.

March, 1908.—Attempt to shoot Mr. Higginsbotham, a missionary, at Kushtok.

April 11th, 1908.—Bomb thrown at the Mayor of Chandernagore.

April 30th, 1908.—Murder of Mrs. and Miss Kennedy at Mosafertpore.

August, 1908.—Mr. Camble, Mill-manager, severely injured by a bomb on the E. B. S. railway.

August, 1908.—Murder of Narendra Nath Posaia, the approver in the Alipore case, in Alipore Jail.

November 6th, 1908.—Attempt on the life of Sir Andrew Fraser at Overtoun Hall.

November 9th, 1908.—Murder of Inspector Vundo Lal Banerjee, who arrested Khudiram Bose, in Serpentine Lane, Calcutta.

November, 1908.—Sukumar, alleged informer, murdered at Dacca.

February 10th, 1908.—Murder of Babu Ashutosh Biswas in the Courtyard at Alipore.

June, 1909.—Prlo Mohun Chatterji (brother of an approver) stabbed to death at Fatehjangpur.

July 1st, 1909.—Assassination of Lieutenant-Colonel Sir William Curzon Wylie, at the Imperial Institute, London.

November 13th, 1909.—Bomb explosion near H. E. Lord Minto's carriage at Ahmedabad.

December 21st, 1909.—Assassination of Mr. A. M. T. Jackson, I.C.S., Collector of Nask.

January 24th, 1910.—Murder of Khan Bahadur Shams-ul-Alum.

February 21st, 1911.—Murder of Head Constable Srish Chakravarty.

March 2nd, 1911.—Attempt to murder Mr. Cowley, P.W.D., with a bomb in Calcutta.

April 19th, 1911.—Babu Manmohan Dey, witness in Munshiganj bomb case, shot dead at Routhbog.

June 17th, 1911.—Murder of Mr. Ashe, Collector of Tinnevely.

June 18th, 1911.—Murder of Sub-Inspector Raj Kumar Roy at Mymensingh.

July 1911.—Sonarang case, Rahun Dewan Duffadar, Amari-Dewan, and Kati Benode Chakravarti shot at Nitrapati.

September 21st, 1912.—Head Constable Radhial Roy shot dead at Dacca.

December 13th, 1912.—Attempt to assassinate Abdul Rahaman, one of the witnesses for the police in the Midnapore conspiracy case.

December 23rd, 1912.—H. E. Lord Hardinge wounded, and one of his servants killed, by a bomb during the State entry into Delhi.

March 27th, 1913.—Attempt to murder Mr. Gordon, the sub-divisional officer, with a bomb at Molvi Bazaar, Sylhet.

May 17th, 1913.—Chaprasi in the employ of the Lahore Gymkhana Club killed by a bomb near the Lawrence Gardens, Lahore.

September 29th, 1913.—Murder of Head Constable Haripado Deb, College Square, Calcutta.

September 30th, 1913.—Bankim Chandra Chowdhury, Inspector of Police at Mymensingh, formerly of Dacca, killed by a bomb.

January 19th, 1914.—Nripendra Nath Ghose, Inspector of the Calcutta C.I.D., shot dead on the Chitpur Road, Calcutta. A Tel boy, named Ananda, was also shot dead.

November 27th, 1914.—Seven persons committed to Ferozpoore Sessions for shooting dead

Sub-Inspector Bishrat Ali and Zemindar Jowala Singh.

February 28th, 1915.—Police Inspector Suresh Chandra Mukerji, who had been engaged in connexion with taxi-cab dacoities in Calcutta, shot dead while on duty by four men with revolvers. His orderly was wounded. The assassins escaped.

March 9th, 1915.—Mussalmanpura Bomb Case. Two bombs were thrown at the house occupied by Mr. Basant Kumar Chatterji, Deputy Superintendent of Police.

April 30th, 1915.—Lahore Sedition trial. Three bombs, one revolver, one dagger and materials for bombs were found. The conspirators attempted to loot the Government treasury at Moga. They were met by Bishrat Ali, Sub-Inspector of Police. A scuffle ensued which culminated in the death of the Sub-Inspector as well as of Jowala Singh Ziladar.

August 25th, 1915.—Commissioner of Danihatli shot dead. A police constable seriously injured by several revolver shots fired from a Motor Car in an outrage near Calcutta.

October 9th, 1915.—Jatindra Mohun Ghose, Deputy Superintendent of Police and his son shot dead at Mymensingh.

October 22nd, 1915.—Sub-Inspector Girindra Nath Banerjee killed and another officer wounded in an attempt on the lives of four C. I. D. officers in Calcutta.

June 23rd, 1916.—Two police Officers named Surendra Bhushan Mukerji and Rohini Mukerji, of the Dacca Intelligence Branch, were shot dead.

The list, it will be seen, includes two attempts on the life of the Viceroy himself. It does not include a number of equally significant disturbances, such as the riots in Bombay (June 1908), during the trial of Tilak, which led to considerable loss of life. Concurrently with these repressive measures steps were taken to extend representative institutions. In 1907 a Hindu and a Mahomedan were appointed to the Secretary of State's Council, and in 1909 a Hindu was appointed for the first time to the Viceroy's Council. The Indian Councils Act of 1909 carried this policy farther by reconstituting the legislative councils and conferring upon them wider powers of discussion. The executive councils of Madras and Bombay were enlarged by the addition of an Indian member.

### Lord Minto.

As regards foreign policy, Lord Minto's Viceroyalty was distinguished by the conclusion (1907) between Great Britain and Russia of an agreement on questions likely to disturb the friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular. Two expeditions had to be undertaken on the North-West frontier, against the Zakka Khels and the Mohmands; and ships of the East Indies Squadron were frequently engaged off Maskat and in the Persian Gulf in operations designed to check the traffic in arms through Persia and Mekran to the frontier of India. Towards Native States Lord Minto adopted a policy of less interference than that followed by his predecessors.



sor. He invited their views on sedition, and, in a speech at Udaipur, disclaimed any desire to force a uniform system of administration in Native States, and said he preferred their development with due regard to treaties and local conditions. Lord Minto left India in November, 1910, a few weeks after Lord Morley had resigned the Secretaryship of State, the tenure of their respective posts having been practically identical in point of time. The position of the Viceroy had in those years materially changed. Lord Minto had a weak Council, and this weakness was reflected in the government of Bengal and Madras; but it is more important to note that Lord Morley had extended the policy of transferring the actual government of India from India to London, to such an extent that the Under-Secretary for India was able to describe the Viceroy as merely the agent of the Secretary of State.

### Visit of the King and Queen.

Sir Charles (Lord) Hardinge was appointed to succeed Lord Minto. His first year in India was marked by a weak monsoon and famine in parts of Western India, still more by the visit to India of the King Emperor and the Queen, who arrived at Bombay on December 2, 1911. From there they proceeded to Delhi where, in the most magnificent durbar ever held in India, the coronation was proclaimed and various boons, including an annual grant of 50 lakhs for popular education, were announced. At the same ceremony His Majesty announced the transfer of the capital of India from Calcutta to Delhi; the reunion of the two Bengals under a Governor-in-Council, the formation of a new Lieutenant-Governorship for Behar, Chota Nagpur, and Orissa, and the restoration of Assam to the charge of a Civil Commissioner. On December 14, a review of 60,000 British and Indian troops was held, and on the 15th Their Majesties each laid a foundation stone of the new capital. From Delhi the King went to Nepal, and the Queen to Agra and Rajputana, afterwards meeting at Bankipur and going to Calcutta. Thence they returned to Bombay and sailed for England on January 10. "From all sources, public and private," wrote His Majesty to the Premier, "I gather that my highest hopes have been realised.....Our satisfaction will be still greater if time proves that our visit has contributed to the lasting good of India and of the Empire at large."

In March, 1912, a committee of experts was appointed to advise the Government of India as to the site of the new capital. Temporary buildings were erected to accommodate the Government, and on December 23 the State entry into Delhi was made by the Viceroy. This ceremony was marred by an attempt on His Excellency's life as he passed down the Chandni Chauk. The bomb thrown from a house killed an attendant behind the Howdah in which the Viceroy was sitting, seriously wounded Lord Hardinge, but left Lady Hardinge unscathed. The courage displayed by Their Excellencies was unsurpassed and elicited the admiration of all; but, in spite of the offer of large rewards, the assassin was not caught.

Educational schemes claimed a large place

in public attention during 1912 and 1913. In the former year a Royal Commission, under the presidency of Lord Islington, was appointed to inquire into the public services of India. In 1912 also a Committee of four was appointed under the Chairmanship of Field Marshal Lord Nelson, to inquire into military policy and expenditure in India. In the following year a Royal Commission was appointed, under the Chairmanship of Mr. Austen Chamberlain to investigate and report on certain administrative questions relating to Indian finance and currency which had for some years been much discussed particularly in India.

In the North-East of India an expedition, under Gen. Bower, was despatched against the Abors for the punishment of the murderers of Mr. Noel Williamson.

In August, 1913, the demolition of a lavatory attached to a mosque in Cawnpore was made the occasion of an agitation among Indian Mahomedans and a riot in Cawnpore led to heavy loss of life. Of those present at the riot, 106 were put on trial but subsequently released by the Viceroy before the case reached the Sessions, and His Excellency was able to settle the mosque difficulty by a compromise that was acceptable to the local and other Mahomedans.

In October, 1913, it was announced that General Sir Beauchamp Duff had been appointed to succeed Sir O'Moore Creagh as Commander-in-Chief. This was a departure from the long tradition of alternately choosing the Commander-in-Chief from the British and the Indian Army. There were special reasons for the nomination of Sir Beauchamp Duff, who as Adjutant-General in India, and Chief of Staff during Lord Kitchener's term gave proof of his thorough knowledge of Indian conditions and his exceptional powers as a military administrator. The Military changes in India in 1905 and 1909 had profoundly modified the duties of the Commander-in-Chief and had conferred on him alone duties formerly divided between the Commander-in-Chief and the Military Member of Council and had made him the administrative head of the Army.

In the latter part of 1913 considerable feeling was aroused in India by the circulation of stories—many of them shown to be unfounded—about the ill-treatment of Indians in South Africa. Rioting by Indians in Natal was followed by the appointment by the Union Government of a Committee of Inquiry at which the Government of India was represented by Sir Benjamin Robertson. The Commission's report afforded the basis of a settlement commonly regarded as equitable. In the autumn of 1914 the Viceroy, at a Council meeting, outlined a reciprocal scheme for controlling emigration in India and in the Colonies, as an alternative to the principle of free migration between all parts of the Empire, for which the Government of India had long contended.

In July the death of Lady Hardinge, wife of the Viceroy, took place in London after an operation. The courage she had displayed at Delhi when the Viceroy was wounded by a bomb, and the sympathetic and active interest she had displayed in the women and children of India, had endeared her to all classes. Her

death was widely mourned, and her memory is to be perpetuated by a memorial originated by the Aga Khan.

### Effects of the War.

The various effects of the European war upon India are fully discussed elsewhere. But it must here be set on record that the declaration of war was followed in India by an unprecedented declaration of loyalty on all sides, and the numerous offers of help or personal service made by the Chiefs and peoples aroused in England a feeling of intense gratitude. A military force numbering some 2,00,000, was sent from India to Europe and East Africa, within a short time of the outbreak of hostilities. The announcement of that fact was made on the same day that a message from the King-Emperor was published. In His Imperial Majesty said:—"Amongst the many incidents that have marked the unanimous uprising of the populations of my Empire in defence of its unity and integrity, nothing has moved me more than the passionate devotion to my Throne expressed both by my Indian and English subjects and by the Feudatory Princes and Ruling Chiefs of India and their prodigious offers of their lives and their resources in the cause of the realm. Their one-voiced demand to be foremost in the conflict has touched my heart and has inspired to the highest issues the love and devotion which, as I well know, have ever linked my Indian subjects and myself." India was not included in the actual theatre of hostilities, except when Madras was subjected to a slight bombardment by the German cruiser "Emden;" but shipping in the Bay of Bengal and in the Arabian Sea was on several occasions interfered with, and several vessels were sunk, by enemy ships.

In spite of the war the year 1915 was one of comparative peace and order in India. A continuous effort was maintained in all parts of India to keep the troops at the front and the wounded on their return well supplied with "comforts," and the Princes and people of India contributed handsomely to the various war and relief funds.

The various measures taken in connexion with the war are related elsewhere in this volume. Here mention need be made only of a Bill passed in the Imperial Legislative Council which gave power to the Governor-General in Council to issue Regulations to insure the safety of the country and was modelled generally on the English Defence of the Realm Act. It also permitted the creation of a special tribunal of three Commissioners, of whom two must have qualifications of a sessions or an additional sessions judge, to hear cases made over to them by order of the local Government concerning breaches of regulations under the Act for any offence punishable with death, transportation, or imprisonment for a term of seven years. In connexion with the war also the Viceroy—whose term of office was extended by six months—made a journey up the Persian Gulf, visiting the oil works at Abadan, and Basra, Shabab, and Kurna. On his return he visited Maskat, where there had been fighting in January.

There were several fights on the North-West frontier during the year, but the tribesmen

never succeeded in penetrating far into British territory. In Bengal, as will be seen from the list of anarchical crimes quoted above, there were a number of signs that the spirit of lawlessness had by no means been stamped out. More serious, however, to the welfare of the country as a whole was the return in September, 1914 (see Indian Year Book, 1914) of a number of Sikh emigrants from British Columbia. The riot at Budge-Budge on that occasion gave a foretaste of the revolutionary plans entertained by many of these men. The sequel was seen in the Lahore Conspiracy case in which a Special Commission sentenced 24 persons to death, 27 to transportation for life, and six to terms of imprisonment. The judgment showed that a plot had been prepared with the object of overthrowing the Government, and the evidence in the case supported the idea that Germans had aided the conspirators and that at least after the war broke out the conspirators regarded themselves as aligned with the enemies of Great Britain. Of the death sentences 16 were subsequently commuted to transportation for life. The appeals in the Delhi Conspiracy case (see Indian Year Book, 1914, p. 650) were heard in the early part of the year—four by the Privy Council—and the sentnces confirmed.

In the spring of 1916 Lord Hardinge, whose great services had just been rewarded with the Knighthood of the Garter, left India after receiving from all parts of the country proofs of the very high esteem in which he was held. His successor Lord Chelmsford had previous to his appointment served in India as an officer of a Territorial regiment.

The effects of the war were felt in a variety of ways, in the constant despatch of drafts for the expeditionary forces and in the reception of a very large number of sick and wounded, particularly from Mesopotamia. The fall of Kut and the general management of the campaign in Mesopotamia excited a great deal of criticism and resulted in the appointment of a committee of inquiry, in the recall of Sir Beauchamp Duff to give evidence, and in Sir Charles Monroe being appointed to be Commander-in-Chief. An equal amount of criticism was directed to certain matters of internal administration, such as the sending of a troop train from Karachi across the Sind desert in the hot weather which led to 15 deaths from heat stroke. Among the events of the war which particularly affected India were the death of Lord Kitchener, the loss of the P. & O. S. Persia, and the revolt of the Sheriff of Mecca against the Turks. Portugal's action in joining the Allies was welcomed on account of the ancient connexion of Portugal with India; it led in the first instance to the seizure of a number of German and Austrian ships at Marmagao.

Favoured by a good monsoon and other circumstances the cotton and jute industries attained to a pitch of great prosperity. The appointment of an industries commission gave promise of efforts to be made in the future to develop industrial India, and one was in which that can be done was illustrated in Burma where determined attempts were made to push forward the hitherto comparatively neglected wolfram industry.

During the year the foundation stone of the Hindu University at Benares was laid.

The impulse which drove the British to India was not conquest but trade. The Government of India represents the slow evolution from conditions established to meet trading requirements. On September 24, 1599, a few years before the deaths of Queen Elizabeth and Akbar, the merchants of London formed an association for the purpose of establishing direct trade with the East and were granted a charter of incorporation. The Government of this Company in England was vested in a Governor with a General Court of Proprietors and a Court of Directors. The factories and affairs of the Company on the East and West Coast of India, and in Bengal, were administered at each of the principal settlements of Madras (Fort St. George), Bombay and Calcutta (Fort William), by a President or Governor and a Council consisting of the senior servants of the Company. The three "Presidencies" were independent of each other and subordinate only to the Directors in England.

#### Territorial Responsibility Assumed.

The collapse of Government in India consequent on the decay of Moghul power and the intrigues of the French on the East Coast forced the officers of the Company to assume territorial responsibility in spite of their own desires and the insistent orders of the Directors. Step by step the Company became first the dominant, then the paramount power in India. In these changed circumstances the system of government by mutually independent and unwieldy councils of the merchants at the Presidency towns gave rise to grave abuses. Parliament intervened, and under the Regulating Act of 1773, a Governor-General and four councillors were appointed to administer the Presidency of Fort William (Bengal), and the supremacy of that Presidency over Madras and Bombay was for the first time established. The subordinate Presidencies were forbidden to wage war or make treaties without the previous consent of the Governor-General of Bengal in Council, except in cases of imminent necessity. Pitt's Act of 1784, which established the Board of Control in England, vested the administration of each of the three Presidencies in a Governor and three councillors, including the Commander-in-Chief of the Presidency Army. The control of the Governor-General-in-Council was somewhat extended, as it was again by the Charter Act of 1793. Under the Charter Act of 1833 the Company was compelled to close its commercial business, and it became a political and administrative body holding its territories in trust for the Crown. The same Act vested the direction of the entire civil and military administration and sole power of legislation in the Governor-General-in-Council, and defined more clearly the nature and extent of the control to be extended over the subordinate governments. After the Mutiny, there was passed, in 1858, an Act transferring the Government of India from the Company to the Crown. This Act made no important change in the administration in India, but the Governor-General, as representing the Crown, became known as the Viceroy. The Governor-General is the sole representative of the Crown in India; he is assisted by a Council, composed of high officials, each of whom is responsible for a special department of the administration.

#### Functions of Government.

The functions of the Government of India are perhaps the most extensive of any great administration in the world. It claims a share in the produce of the land and in the Punjab and Bombay it has restricted the alienation of land from agriculturists to non-agriculturists. It undertakes the management of landed estates where the proprietor is disqualified. In times of famine it undertakes relief work and other remedial measures on a great scale. It manages a vast forest property and is the principal manufacturer of salt and opium. It owns the bulk of the railways of the country, and directly manages a considerable portion of them; it has constructed and maintains most of the important irrigation works; it owns and manages the post and telegraph systems; it has the monopoly of the Note issue, and it alone can set the mints in motion. It lends money to municipalities, rural boards, and agriculturists and occasionally to owners of historic estates. It controls the sale of liquor and intoxicating drugs and has direct responsibilities in respect to police, education, medical and sanitary operations and ordinary public works of the most intimate character. The Government has also close relations with the Native States which collectively cover more than one-third of the whole area of India and comprise more than one-fifth of its population. The distribution of these great functions between the Government of India and the provincial administrations fluctuates; broadly speaking it may be said that the tendency of the day is to confine the Government of India to control and the Local Governments to administration.

#### Division of Responsibility.

The Government of India retains in its own hands all matters relating to foreign relations, defence, general taxation, currency, debt, tariffs, posts, telegraphs and railways. The ordinary internal administration—the assessment and collection of revenue, education, medical and sanitary arrangements, and irrigation, buildings and roads, fall within the purview of the Local Governments. In all these matters the Government of India exercises a general and constant control. It prescribes lines of general policy, and tests their application from the annual administration reports of the Local Authorities. It directly administers certain Imperial departments, such as Railways, Post Office, Telegraphs, the Survey of India and Geology; it employs a number of inspecting officers for those departments primarily left to Local Governments, including Agriculture, Irrigation, Forests, Medical and Archaeology. It receives, and when necessary modifies, the annual budgets of Local Governments; and every new appointment of importance, and every large addition even to minor establishments has to receive its specific sanction. There also exists a wide field of appeal to the Government of India from officials or private individuals who may feel themselves aggrieved by the action of Local Governments; and outside the Presidencies of Madras, Bombay and Bengal, the approval of the Governor-General is necessary to the appointment of some of the most important officers of the provincial administration.

The supervision of the principal Native States rests directly with the Governor-General in Council, but Local Governments have also responsibilities in this direction, where important States have historical association with them, and in the case of minor States.

### Personnel of the Government.

The Governor-General and the "ordinary" members of his Council are appointed by the Crown. No limit of time is specified for their tenure of office, but custom has fixed it at five years. There are six "ordinary" members of Council, three of whom must, at the time of their appointment, have been at least ten years in the service of the Crown in India, one of the three remaining members must be a Barrister, the qualifications of the fifth and sixth are not prescribed by statute. The Indian civilians hold respectively the portfolios of Land Revenue and Agriculture, the Home, the Finance and the Education Departments. The Law Member has charge of the Legislative Department, and a member with English official experience has charge of the Commerce and Industry Department. The Viceroy acts as his own member in charge of Foreign affairs. Railways are administered by a Board of three members, whose chairman has the status of a Secretary, and are under the general control of the Commerce and Industry Department. The Commander-in-Chief may also be and in practice always is, an "extraordinary" member of the Council. He holds charge of the Army Department. The Governors of Madras, Bombay and Bengal become "extraordinary" members if the Council meets within their Presidencies. The Council may assemble at any place in India which the Governor-General appoints; in practice it meets only in Delhi and Simla.

### Business Procedure.

In regard to his own Department each Member of Council is largely in the position of

a Minister of State, and has the final voice in ordinary departmental matters. But any question of special importance, and any matter in which it is proposed to over-rule the views of a Local Government, must ordinarily be referred to the Viceroy. Any matter originating in one department which also affects another must be referred to the latter, and in the event of the Departments not being able to agree, the case is referred to the Viceroy. The Members of Council meet periodically as a Cabinet—ordinarily once a week—to discuss questions which the Viceroy desires to put before them, or which a member who has been over-ruled by the Viceroy has asked to be referred to Council. If there is a difference of opinion in the Council the decision of the majority ordinarily prevails, but the Viceroy can over-rule a majority if he considers that the matter is of such grave importance as to justify such a step. Each departmental office is in the subordinate charge of a Secretary, whose position corresponds very much to that of a permanent Under-Secretary of State in the United Kingdom, but with these differences—that the Secretary is present at Council meetings, that he attends on the Viceroy, usually once a week, and discusses with him all matters of importance arising in his Department, that he has the right of bringing to the Viceroy's special notice any case in which he considers that the Viceroy's concurrence should be obtained to action proposed by the Departmental Member of Council, and that his tenure of office is usually limited to three years. The Secretaries have under them Deputy, Under and Assistant Secretaries, together with the ordinary clerical establishments. The Secretaries and Under-Secretaries are usually members of the Indian Civil Service. The Government of India has no Civil Service of its own as distinct from that of the Provincial Governments, and officers serving under the Government of India are borrowed from the Provinces.

## Government of India.

## VICEROY AND GOVERNOR-GENERAL OF INDIA

His Excellency the Right Hon. BARON CHELMSFORD, P. C., G.M.S.I., G.C.M.G., G.M.I.E.,  
assumed charge of office, 5th April, 1916.

## PERSONAL STAFF OF THE GOVERNOR-GENERAL.

*Private Secretary*, J. L. Maffey, C.I.E., I.C.S.

*Military Secretary*, Lieut.-Col. R. Verney, The Rifle Brigade.

*Comptroller of the Household*, Major J. Mackenzie, C.I.E., 35th Sikhs.

*Asst. Private Secretary*, H. A. F. Metcalfe, I.C.S.

*Aides de-Camp*, Captain W. A. Brown, 4th Bat., Wilt. Regt.; Captain C. A. V. Sykes, Capt. W. Holland-Hibbert, Capt. R. H. Shephards (extra); Muhi-ud-Din Khan; Risaldar-Major, Sardar Bahadur, 31st Lancers; Karam Singh, Risaldar Major, 13th Duke of Connaught's Lancers.

*Honorary Aides-de-Camp*, Lumsden, Capt. W. R. N., C.V.O.; Stanyon, Hon. Col. H. L., C.I.E., V.D., Nagpur Volunteer Rifles; Cuffe, Hon. Lt.-Col. O.F.L.W., V.D., Upper Burma Vol. Rifles; Agabeg, Hony. Col. F. J., Chota Nagpur Light Horse; Grice, Hony. Col. W. T., V.D., 1st Battalion, Calcutta Vol. Rifles; Knowles, Hony. Col. J. G., C.I.E., V.D., Surma V.L. Horse; Warburton, Hony. Col. H. G., Luck. V. Rifles; Pugh, Hony. Col. A. J., V.D., Calcutta Light Horse; Reid, Hony. Lt. Col. Sir Stanley, Bombay Light Horse; Henry, Hon. Col. W.

D., C.I.E., Simla Vol. Rifles; Muhammad Ali Beg, Hony. Lt.-Col. Sir Nawab Bahadur, K.C.I.E., M.V.O., Commanding H. H. the Nizam's Forces; Zorawar Singh, Capt. Commandant, Bhawanagar, Imperial Service Lancers; Maharaj Sher Singh, Commandant, 2nd Sardar Risala, Jodhpur Imperial Service Troops.

*Wali Muhammad*, Risaldar-Major, (Hony. Capt.) Sardar Bahadur, late Governor-General's Body Guard, Abdul Aziz, Risaldar-Maj. (Hony. Capt.) Sardar Bahadur, late 5th Cav. Madho Singh Rana, Subadar-Major (Hony. Capt.) Sardar Bahadur, late 4 G. R., Abdul Karim Khan, Risaldar-Major, (Hony. Capt.) Sardar Bahadur, late Governor-General's Body-Guard, Mit Singh, Subadar, Major Sardar Bahadur, late 50rd Sikhs.

*Indian Aides-de-Camp*, Mahiuddin Khan, Risaldar Major, Sardar Bahadur 31st Lancers; Karam Singh, Risaldar Major, 17th Lancers.

*Surgeon*, Lieut.-Col. H. Austen-Smith, M.B., I.M.S.

*Commandant of Body Guard*, Capt. W. A. S. de G. le, 5th Cavalry.

## Ordinary Members—

## COUNCIL.

Sir G. S. Barnes, K.C.B. Took his seat, 6th April, 1916.

Sir R. H. Craldock, K.C.S.I. Took his seat, 27th January, 1912. (Sir William Vincent designate.)

Sir William Meyer, K.C.S.I., K.C.I.E. Took his seat, 30th June, 1913.

A. C. H. A. Hill, C.S.I., C.I.E. Took his seat, 5th July, 1915.

Sir Santhan Nair, Took his seat, 2nd November, 1915.

Mr. G. R. Lowndes, Took his seat 20th December, 1915. (Law).

## Extraordinary Member—

H. E. Gen. Sir Charles Carmichael Monro, G.C.M.G., K.C.B., Commander-in-Chief in India.

## SECRETARIAT.

## REVENUE AND AGRICULTURE DEPARTMENT.

*Secretary*, R. A. Mant.

*Under Secretary*, A. E. Gilliat, I.C.S.

*Inspector-General of Forests*, G. S. Hart.

*Assistant Inspector-General of Forests*, R. S. Troup.

*Registrar*, J. D. Shapecott.

*Superintendents*, W. A. Threlfall, C. H. Martin, H. H. Lincoln, T. McDonnell.

## FINANCE DEPARTMENT.

## Ordinary Branch.

*Secretary*, The Hon. Mr. J. B. Brunyate, C.I.E., I.C.S.

*Officiating Secretary*,—H. F. Howard, C.I.E., I.C.S.

*Officiating Deputy Secretary*, G. Rai, I.C.S.

*Under Secretary*, A. A. L. Parsons, I.C.S.

*Assistant Secretary*, A. V. V. Aiyar, B.A.

*Registrar*, E. W. Baker, I.C.S.

*Superintendents*, M. H. Khan, G. W. C. Bradey, G. J. Piper, C. N. Chakrabarty, V. K. Menon, S. V. Aiyar, B.A., R.L., Shah Muhammad.

*Comptroller and Auditor-General*, R. A. Gamble.  
*Controller of Currency*, M. M. S. Gubbay, C.I.E., I.C.S.

## Military Finance Branch.

*Financial Adviser*, Hon. Mr. G. B. H. Fell, C.I.E., I.C.S.

*Military Accountant-General and ex-officio Deputy Financial Adviser*, Col. B. W. Marlow, C.I.E., I.A.

*Deputy Financial Adviser*, W. C. Ashmore.

*Officiating Deputy Financial Adviser*, Major E. B. Peacock, I.A.

*Additional Deputy Financial Adviser*, F. Burdon, I.C.S.

*Assistant Financial Adviser*, W. D. Gray.

*Registrar*, W. C. Olsson.

*Superintendents*, Lieut. T. A. Duffy, G. E. Hodges, G. M. Turner, A. W. Schönmann.

## FOREIGN DEPARTMENT.

*Political Secretary*, Hon. Mr. J. B. Wood, C.I.E.

*Foreign Secretary*, Hon. Mr. A. H. Grant.

*Deputy Secretaries*, R. E. Holland, I.C.S., D. de S. Bray, I.C.S.

*Under Secretary*, H. D. Graves Law, I.S.O.  
*Assistant Secretary*, Major R. H. Chenevix Trench.

*Attache*, Khan Bahadur Maula Baksh.  
*Registrar*, T. G. B. Waigh.  
*Off. Inspector-General, Imperial Service Troops*,  
Brigadier-General J. L. Rose.  
*Superintendents*, A. Stapleton, I.S.O., S. A. Blaker,  
E. L. Nile, D. A. Churn, C. W. Kirkpatrick,  
E. Bebram Higgs, C. O., H. Telling, F. B.  
Buckner, J. W. S. Inglis, L. Fox and K. D.  
Fink.

#### HOME DEPARTMENT.

*Secretary*, Hon. Sir James du Boulay, K.C.I.E.,  
C.S.I.  
*Deputy Secretary*, S. R. Hignell, I.C.S.  
*Under Secretary*, W. Booth Gravely, I.C.S.  
*Registrar*, G. F. Winn.  
*Superintendents*, J. H. Frost, A. S. Lawrence,  
Rud Abinas Chandra Koor Bahadur, H. C.  
Marsden, P. K. Basu, Bijay Krishna Banerji,  
J. A. Weston.

#### EDUCATION DEPARTMENT.

*Secretary*, Sir E. S. MacLagan, K.C.I.E., C.S.I.  
*Educational Commissioner with the Government of*  
*India*, H. S. R. D. F.  
*Senior Assistant Secretary*, Kunwar Maharaj  
Singh.  
*Junior Assistant Secretary*, G. Anderson, M.A.  
*Superintendents*, M. N. Chakrabarti, L. D.  
Hullston, A. H. Bartlett,  
*Registrar*, R. H. Black.

#### LEGISLATIVE DEPARTMENT.

*Secretary*, A. P. Muddiman, C.I.E.  
*Deputy Secretary*, H. M. Crieft Smith.  
*Attache*, H. Moncreff Smith, I.C.S.  
*Legal Asst.*, S. C. Gupta.  
*Registrar*, C. H. F. Perira.  
*Superintendents*, A. L. Banerji and E. H. Brandon.

#### ARMY DEPARTMENT.

*Secretary*, Hon'ble Lt.-General Sir W. R. Bird-  
wood, C.B., K.C.S.I., C.I.F., D.S.O.  
*Secretary, sub pro tem*, Major General A. H.  
Bingley.  
*Deputy Secretary, sub pro tem*, Lt.-Col. A. H. O.  
Spence.  
*Asst. Secretaries*, Major G. D. Ogilvie, Major  
A. W. Chitty and A. A. Whelan.  
*Registrar*, Mr. R. Thistle Hughes.  
*Superintendents*, W. C. Debenham, A. B.  
Kunning P. P. Hypher, Rai Sahib S. C.  
Biswas and J. C. R. Leslie.

#### PUBLIC WORKS DEPARTMENT.

*Secretary*, The Hon. F. C. Rose.  
*Deputy Secretary*, A. J. R. Hope.  
*Under Secretary*, D. G. Harris.  
*Assistant Secretary*, J. E. Lacey, I.S.O.  
*Registrar*, W. J. Drake, I.S.O.  
*Superintendents*, W. G. Dollman, W. I. Tilden,  
R. R. Reaks, H. M. Marchant.  
*Insp. Genl. of Irign.*, M. Nethersole, C.S.I.  
*Conq. Ach.*, J. Begg, F.R.I.B.A.  
*Elect. Adviser*, J. W. Meares, F.R.A.S., M.I.C.E.,  
M.I.E.E.

#### COMMERCE AND INDUSTRY DEPARTMENT.

*Secretary*, Hon. C. E. Low, C.I.E., I.C.S.  
*Deputy Secretary*, A. H. Ley, I.C.S.  
*Under Secretaries*, I. D. Elliott, I.C.S., G. S.  
Hardy, I.C.S.  
*Controller of Patents and Designs*.—H. G.  
Graves.  
*Attache*, L. D. O. Elliott, I.C.S.  
*Registrar*, E. P. Jones.

*Superintendents*, A. K. Sarkar, B. B. Banerji, S.  
N. Banerji, C. H. Baldrey, Fateh Din, D.  
O'Sullivan, K. D. Banerji, P. Wood-Collins.

#### RAILWAY BOARD.

*President*, The Hon. Sir R. W. Gillan, K.C.S.I.,  
K.C.I.E. *Members*, A. It. Anderson, F. D. Cou-  
ch an, V.I.C.E.

*Secretary*, I. Ryan.

*Chief Engineer*, Sir Robert Gales, Kt.

#### POST OFFICE & TELEGRAPH DEPT.

*Director-General of Posts & Telegraphs*, Hon. Sir  
W. Maxwell, K.C.I.E., M.V.O.

#### NORTHERN INDIA SALT REVENUE.

*Commissioner*, Moberly, A. N.

#### INDO-EUROPEAN TELEGRAPH DEPARTMENT.

##### Persian Gulf and Persian Sections.

*Directors*, E. E. Gunter; H. W. Smith, C.I.E.;  
W. King-Wood, C.I.E. (offg.). *Commander*  
of Cable Steamer "Patrick Stewart," F. W.  
Townend.

#### SURVEY DEPARTMENT.

*Surveyor-General of India*, Col. Sir S. G.

Burrard, K.C.S.I., R.E.

##### GEOLOGICAL SURVEY.

*Director*, H. H. Hayden, C.I.E., B.A., F.G.S.  
*Superintendents*, C. S. Middlemiss, R.A., F.G.S.;  
E. Vredenburg, B.Sc., F.G.S.; L. L. Fermor,  
D.S.O.; F.G.S.  
*Chemist*, W. A. K. Christie, B.Sc., Ph.D.

##### BOTANICAL SURVEY.

*Director*, Major A. T. Gage, M.B., I.M.S.; *Eco-*  
*nomic Botanist*, H. G. Carter, M.B.A.B.; *Economic*  
*Botanist*, Madras, F. R. Farnell; *Economic*  
*Botanist*, Bombay, W. Burns, B.Sc.; *Economic*  
*Botanist*, United Provinces, H. M. Leake,  
M.A., F.L.S.

##### ARCHAEOLOGICAL SURVEY.

*Director-General of Archaeology*, Sir J. H. Marshall,  
M.A., C.I.E.; *Superintendent, Western Circle*,  
D. R. Bhandarkar, M.A.; *Superintendent*,  
*Southern Circle*, A. H. Longhurst; *Superinten-*  
*dent, Eastern Circle*, D. B. Spooner, Ph.D.;  
*Superintendents, Northern Circle*, J. F. Blakis-  
ton; H. Hargreaves; *Superintendent, Burma*,  
C. Duroiselle; *Superintendent, Frontier Circle*,  
Sir M. A. Steh, K.C.I.E., Ph.D., D.Litt., D.Sc.

##### MISCELLANEOUS APPOINTMENTS.

*Director-General, Indian Medical Service*, Surg.-  
Gen. Sir C. P. Lukis, K.C.S.I., M.D., F.R.C.S.,  
K.H.S., I.M.S.

*Sanitary Commissioner with the Government*  
*of India*, Lt. Col. W. W. Clemmish.

*Deputy Director-General, Indian Medical Ser-*  
*vice*, Bt.-Col. Sir B. G. Seton, V.H.S., I.M.S.

*Asst. D. G. I.M.S. Lt.-Col. Jay Gould, M.B., I.M.S.*  
*Asst. Director General, Indian Medical Service*  
*(Sany.)*, Major F. W. White, M.L., I.M.S.

*Director, Central Research Institute, Kasauli*,  
Major W. F. Harvey, M.A., M.B., D.P.H., I.M.S.

*Assistants to Director, Central Research Institute*,  
*Kasauli*, Major E. D. W. Greig, Captain E. C.  
Holmes.

*Director, Pasteur Institute of India, Kasauli*,  
Major A. G. McKendrick.

*Asst. Director, Pasteur Institute of India*,  
*Kasauli*, Capt. H. W. Acton, I.M.S.

*Superintendent, X-ray Institute, Dehra Dun*,  
Major A. E. Walter, I.M.S.

*Director, King Institute of Preventive Medicine*,  
F. M. Gibson, M.B., B.Sc.

*Asst. Director King Institute of Preventive*  
*Medicine*, Major W. S. Patton, M.B., I.M.S.

<b>Director-General of Indian Observatories,</b> G. T. Walker, C.S.I., M.A., D.Sc., F.R.S.	<b>Lord Ellenborough, P.C. (c)</b> .. .. 1842
<b>Imperial Meteorologists,</b> G. C. Simpson, D.Sc.; C. W. B. Normand; Hem Raj.	<b>William Witherforce Bird (offg.)</b> .. 1844
<b>Director, Kodaikanal and Madras Observatories,</b> J. Evershed.	<b>The Right Hon. Sir Henry Hardinge, G.C.B. (d)</b> .. .. 1844
<b>Director, Bombay and Alibagh Observatories, Bombay,</b> N. A. F. Moos.	<b>The Earl of Dalhousie, P.C. (e)</b> .. .. 1848
<b>Director, Aerological Observatory, Agra,</b> J. H. Field, M.A.	<b>Viscount Canning, P.C. (f)</b> .. .. 1856
<b>Secretary, Board of Examiners,</b> Capt. C. L. Peart, I.A.	<b>(a) Afterwards (by creation) Baron Metcalfe.</b>
<b>Officer in Charge of the Records of the Government of India,</b> A. F. Scholfield, M.A. (offg.)	<b>(b) Created Earl of Auckland, 21 Dec., 1839.</b>
<b>Librarian, Imperial Library, Calcutta,</b> J. A. Chapman.	<b>(c) Afterwards (by creation) Earl of Ellenborough.</b>
<b>Agricultural Adviser and Director of the Agricultural Research Institute, Pusa,</b> B. Coventry, C.I.E.	<b>(d) Created Viscount Hardinge, 2 May, 1846.</b>
<b>Director, Zoological Survey of India, Indian Museum, N. Annandale, B.A., D.Sc.</b>	<b>(e) Created Marquess of Dalhousie, 25 Aug., 1849.</b>
<b>Curator, Industrial Section of Indian Museum,</b> D. Hooper, F.C.S., F.L.S.	<b>(f) Afterwards (by creation) Earl Canning.</b>
<b>Chief Inspector of Mines,</b> G. F. Adams.	
<b>Controller of Printing, Stationery and Stamps,</b> M. J. Cogswell.	
<b>Superintendent of Government Printing,</b> J. J. Melkie.	
<b>Chief Inspector of Explosives,</b> Lieut.-Col. C. A. Muspratt-Williams, R.A.	
<b>Administrator-General of Bengal,</b> H. T. Hyde	
<b>Director, Criminal Intelligence,</b> Sir C. R. Cleveland, K.C.I.E.	
<b>Director-General of Commercial Intelligence,</b> H. A. F. Lindsay, C.S.	
<b>Director of Statistics,</b> G. F. Shiras.	
<b>Customs and Excise Chemist,</b> R. L. Jenks.	
<b>GOVERNORS-GENERAL OF FORT WILLIAM IN BENGAL.</b>	
Name.	Assumed charge of office.
Warren Hastings .. ..	1774
Sir John Macpherson, Bart. .. ..	1785
Earl Cornwallis, K.G. (a) .. ..	1786
Sir John Shore, Bart. (b) .. ..	1793
Lieut.-General the Hon. Sir Alured Clarke, K.C.B. (offg.) .. ..	1798
The Earl of Mornington, P.C. (c) .. ..	1798
The Marquis Cornwallis, K.G. (2nd time) .. ..	1805
Sir George H. Barlow, Bart. .. ..	1805
Lord Minto, P.C. (d) .. ..	1807
The Earl of Molra, K.G., P.C. (e) .. ..	1813
John Adam (offg.) .. ..	1823
Lord Amherst, P.C. (f) .. ..	1823
William Butterworth Bayley (offg.) .. ..	1828
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C. .. ..	1828
(a) Created Marquess Cornwallis, 15 Aug. 1791.	
(b) Afterwards (by creation) Baron Feignmouth.	
(c) Created Marquess Wellesley, 2 Dec., 1799.	
(d) Created Earl of Minto, 24 Feb., 1813.	
(e) Created Marquess of Hastings, 2 Dec., 1816.	
(f) Created Earl Amherst, 2 Dec., 1826.	

**GOVERNORS-GENERAL OF INDIA.**

Name.	Assumed charge of office.
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C. .. ..	1834
Sir Charles Metcalfe, Bart. (a) (offg.) .. ..	1835
Lord Auckland, G.C.B., P.C. (b) .. ..	1836

<b>Lord Ellenborough, P.C. (c)</b> .. .. 1842
<b>William Witherforce Bird (offg.)</b> .. 1844
<b>The Right Hon. Sir Henry Hardinge, G.C.B. (d)</b> .. .. 1844
<b>The Earl of Dalhousie, P.C. (e)</b> .. .. 1848
<b>Viscount Canning, P.C. (f)</b> .. .. 1856
<b>(a) Afterwards (by creation) Baron Metcalfe.</b>
<b>(b) Created Earl of Auckland, 21 Dec., 1839.</b>
<b>(c) Afterwards (by creation) Earl of Ellenborough.</b>
<b>(d) Created Viscount Hardinge, 2 May, 1846.</b>
<b>(e) Created Marquess of Dalhousie, 25 Aug., 1849.</b>
<b>(f) Afterwards (by creation) Earl Canning.</b>

**NOTE.**—The Governor-General ceased to be the direct Head of the Bengal Government from the 1st May, 1854, when the first Lieutenant-Governor assumed office. On 1st April, 1912, Bengal was placed under a separate Governor and the appointment of Lieutenant-Governor was abolished.

**VICEROYS AND GOVERNORS-GENERAL OF INDIA.**

Name.	Assumed charge of office.
Viscount Canning, P.C. (a) .. ..	1858
The Earl of Elgin and Kincardine, K.T., G.C.B., P.C. .. ..	1862
Major-General Sir Robert Napier, K.C.B. (b) (offg.) .. ..	1863
Colonel Sir William T. Denison, K.C.B. (offg.) .. ..	1863
The Right Hon. Sir John Lawrence, Bart., G.C.B., K.C.S.I. (c) .. ..	1864
The Earl of Mayo, K.P. .. ..	1869
John Strachey (d) (offg.) .. ..	1872
Lord Napier of Merchistoun, K.T. (e) (offg.) .. ..	1872
Lord Northbrook, P.C. (f) .. ..	1872
Lord Lytton, G.C.B. (g) .. ..	1876
The Marquess of Ripon, K.G., P.C. .. ..	1880
The Earl of Dufferin, K.P., G.C.B., G.C.M.G., P.C. (h) .. ..	1884
The Marquess of Lansdowne, G.C.M.G. .. ..	1888
The Earl of Elgin and Kincardine, P.C. .. ..	1894
Baron Curzon of Kedleston P.C. .. ..	1899
Baron Amythill (offg.) .. ..	1904
Baron Curzon of Kedleston, P.C. .. ..	1904
The Earl of Minto, K.G., P.C., G.C.M.G. .. ..	1905
Baron Hardinge of Penshurst, P.C., G.C.B., G.C.M.G., G.C.V.O., I.S.O. (i) .. ..	1910
Lord Chelmsford .. ..	1916
(a) Created Earl Canning, 21 May 1859.	
(b) Afterwards (by creation) Baron Napier (of Magdala).	
(c) Afterwards (by creation) Baron Lawrence.	
(d) Afterwards Sir John Strachey, G.C.S.I. C.I.E.	
(e) Afterwards (by creation) Baron Napier of Ettrick.	
(f) Afterwards (by creation) Earl of Northbrook.	
(g) Created Earl of Lytton, 28 April, 1880.	
(h) Created Marquis of Dufferin and Ava, 12 Nov. 1888.	
(i) During tenure of office, the Viceroy is Grand Master and First and Principal Knight of the two Indian Orders (G.M.S.I. and G.M.I.E.). On quitting office, he becomes G.C.S.I. and G.C.I.E., with the date of his assumption of the Vicerealty	

# The Imperial Legislative Council.

The constitution of the Executive Council of the Government of India has been sketched; for the purposes of legislation, and to bring the administration into close touch with public opinion, the Executive Council is expanded by additional members into a great legislative assembly. The first step was taken in 1861, when the Indian Councils Act provided that, for the better exercise of the power of making laws and regulations vested in the Governor-General-in-Council, he should nominate "Additional" members for the purposes of legislation only. The additional members were appointed for two years and joined the Council when it met for legislative purposes. The maximum number of members fixed by the Act was twelve, of whom not less than one half were to be non-officials (holding no office under the Government) and in practice most of the non-officials were natives of India. Similar legislative councils were constituted in some of the provinces, but the growth of these bodies will be considered when we come to deal with the provincial administrations.

## The Act of 1892.

In 1892 important additions were made both to the constitution and the powers of the Legislative Council. The number of Additional members was raised to sixteen, and the representative principle was introduced. Whilst the method of appointment was, as before, nomination by the Governor-General, a certain number of nominations were made on the recommendation of specified persons, bodies and associations and in practice these recommendations were never refused. Of the sixteen Additional members, six were usually officials and ten non-officials. Four of the non-officials were nominated on the recommendation of the non-official members of the provincial Legislative Councils, the fifth was recommended by the Calcutta Chamber of Commerce, and the remaining five were chosen by the Governor-General, either with a special view to the legislative business to be transacted, or to secure the due representation of all classes. The Council was also empowered to discuss the budget and to ask questions on matters of public interest.

## Morley-Minto Reforms.

The Imperial Legislative Council took its present shape under what is commonly called the Morley-Minto reform scheme of 1909, and was embodied in the Indian Councils Act of that year. Two principles run through this scheme (1) to secure the fair representation of all the varied interests in the country and (2) to give the Council a real influence in determining the character of the administration. The Imperial Legislative Council now consists of sixty Additional members, of whom thirty-five are nominated by the Governor-General and twenty-five are elected by specified electorates. Of the nominated members not more than twenty-eight may be officials, and three others who must not be officials must be nominated by the Muhamedans of the Punjab, the landholders of the Punjab, and the Indian commercial community respectively. The remaining four seats are at the Governor-

General's disposal to secure experts on special subjects or representatives of minor interests. Of the twenty-five elected members, eleven are selected by the non-official members of the provincial Legislative Councils, two by each of the four largest provinces and one by each of the three other provinces. A twelfth is elected by the District and Local Boards of the Central Provinces, as that administration has no legislative council. Six members are elected by electorates of landowners in six provinces, five by the Muhamedan community in each of the five provinces, and two by the Chambers of Commerce in Calcutta and Bombay. The Governor-General-in-Council has the exceptional power of excluding a candidate whose reputation and antecedents are such that his election would be contrary to the public interest. An oath, or affirmation of loyalty to the Crown is required of every member before he takes his seat. Members hold office for three years, and each triennium there is a general election for the Council.

## Powers of the Council.

The additions to the non-legislative powers of the Council by the Act of 1909 were also substantial. The Council can exercise a material influence on the Budget. The Finance Member first presents the preliminary estimates with an explanatory memorandum. On a subsequent day he makes such further explanations as he thinks necessary. Members can thereupon move resolutions regarding any proposed alteration in taxation, any proposed loan, or any additional grant to Local Governments. When these resolutions are voted upon, the estimates are taken by groups, and resolutions may be moved on any heads of revenue or expenditure. Certain heads, as for instance, Customs and the Army, are excluded from discussion. The Finance Member takes these discussions into consideration, and then presents his final budget. He describes the changes made, and why any resolutions that have been pressed have not been accepted. A general discussion of the budget then takes place, but no resolution may be moved, or vote taken. Government is not bound to act upon the resolution of the Council. This power is never likely to be used, because the Government has an official majority on that body. This official majority was specially prescribed by the Secretary of State, because as Parliament is, in the last resort, responsible for the good government of India, the British Government, through its mouthpiece, the Secretary of State, must have the means of imposing its will on the Government of India.

Apart from the Budget debates, members of Council now have the right to initiate the discussion of any question of public interest at any sitting of the Council by moving a resolution. The right of interpellation has also been expanded by the power of asking supplementary questions in order to elucidate a reply given to an original question. The President of the Council may disallow any question which, in his view, cannot be answered consistently with the public interests.



**Control over Legislation.**

The legislative powers of the Imperial Legislative Council are still regulated by the Act of 1861. Certain Acts of Parliament under which the Government of India is constituted cannot be touched and no law can be made affecting the authority of Parliament or allegiance to the Crown. With these exceptions the legislative powers of the Governor-General-in-Council over the whole of the British India are unrestricted. Measures affecting the public debt, or the revenues of India, the religion of any of His Majesty's subjects, the discipline or maintenance of the military or naval forces, and the relations of the Government with foreign states cannot be introduced by any member without the previous sanction of the Governor-General. Every Act requires the

Governor-General's assent. The assent of the Crown is not necessary to the validity of an Act, but the Crown can disallow any Act that has been passed.

Apart from these legislative powers the Governor-General-in-Council is authorised to make, without calling in the Additional Members, regulations having the force of law for the less advanced parts of the country, where a system of administration simpler than that in force elsewhere is desirable. In cases of emergency the Governor-General can, on his own authority and without reference to his Council, make Ordinances which have the force of law for six months.

All Members of the Imperial and Provincial Legislative Councils are entitled to the prefix "Hon'ble Mr." during their term of office.

**A.—Elected Members.**

(Not to be less than 27.)

Serial No.	Name.	Electorate.
1	Rao Bahadur Narasimheswara Sarma Garu ..	Non-official Member, Madras.
2	Mr. Srinivasa Sastri .. .. .	Do, do
3	Sir Ibrahim Rahimtoola, Kt., C.I.E. ..	Do, Bombay.
4	Mr. Dinsha Fduljee Wacha .. .. .	Do, do.
5	Babu Bhupendra Nath Basu .. .. .	Do, Bengal.
6	Raj Sita Nath Ray Bahadur .. .. .	Do, do.
7	Dr. Tej Bahadur Sapru .. .. .	Do, United Provinces.
8	Pandit Madan Mohan Malaviya .. .	Do, do.
9	Sardar Bahadur Sardar Sundar Singh Maji talia.	Do, Punjab.
10	Maung Bah Too, C.I.E. .. .. .	Do, Burma.
11	Raj Bahadur Kriшна Sahay .. .. .	Do, Bihar and Orissa.
12	Mr. Kamini Kumar Chanda .. .. .	Do, Assam.
13	Mr. M. B. Dadabhoi .. .. .	District Councils and Municipal Committees, Central Provinces.
14	Mr. K. Rangaswami Ayyangar .. ..	Landholders, Madras.
15	Khan Bahadur Sayad Allahandoshah ..	Do, Bombay. (Sardars of Gujarat.)
16	Maharaja Manindra Chandra Nandi Kasimbazar.	of Landholders, Bengal.
17	Raja Sir Rampal Singh, K.C.I.E. .. ..	Do, United Provinces. (Landholders of Agra.)
18	Raja Rajendra Narayan Bhanja Deo ..	Do, Bihar and Orissa.
19	Raj Bahadur Bishan Dutt Shukul .. ..	Do, Central Provinces.
20	Khan Bahadur Mir Asad Ali Khan .. ..	Muslimadan Community, Madras.
21	Mr. Mahomed Ali Jinnah .. .. .	Do, Bombay.
22	Mr. Abdur Rahim .. .. .	Do, Bengal.
23	Khan Bahadur Nawab Salyid Nawab Ali Chaudhuri.	Do, do.
24	Raja Sir Muhammad Ali Muhammad Khan, K.C.I.E., Khan Bahadur, of Mahaudabad.	Do, United Provinces.
25	Mr. Mazharul Haque .. .. .	Do, Bihar and Orissa.
26	Sir F. H. Stewart, C.I.E. .. .. .	Bengal Chamber of Commerce.
27	Mr. J. S. Wardlaw Milne .. .. .	Bombay Chamber of Commerce.

**B.—Nominated Members.**  
(Not to exceed 33.)

Serial No.	Name.	Province or body represented.
<b>(a) OFFICIAL MEMBERS.</b>		
<i>Not more than 28.</i>		
1	Mr. J. G. Cumming, C.I.E. .. .. .	Bengal.
2	Mr. C. W. M. Hudson .. .. .	Bombay.
3	Mr. W. Maude .. .. .	Bihar and Orissa.
4	Sir Verney Lovett, K.C.S.I. .. .. .	The United Provinces.
5	Mr. C. H. Atkins .. .. .	The Punjab.
6	Lt.-Col. S. L. Aplin, C.S.I. .. .. .	Burma.
7	Mr. J. Walker, C.I.E. .. .. .	The Central Provinces.
8	Mr. W. T. Reid .. .. .	Assam.
9	Sir J. S. Donald, K.C.I.E., C.S.I. .. .. .	The N.-W. F. Province.
10	Mr. C. H. Kesteven .. .. .	Government of India.
11	Mr. H. Sharp, C.I.E. .. .. .	Do.
12	Sir William Maxwell, K.C.I.E., M.V.O. .. .. .	Do.
13	Mr. J. B. Wood, C.S.I., C.I.E. .. .. .	Do.
14	Sir E. D. MacLagan, K.C.I.E., C.S.I. .. .. .	Do.
15	Surg-on-General Sir C. P. Lukis, K.C.S.I. .. .. .	Do.
16	Mr. R. A. Mant .. .. .	Do.
17	Mr. F. C. Rose .. .. .	Do.
18	Mr. A. P. Muddiman, C.I.E. .. .. .	Do.
19	Mr. R. A. Gamble .. .. .	Do.
20	Mr. C. E. Low, C.I.E. .. .. .	Do.
21	Sir R. W. Gellan, C.S.I. .. .. .	Do.
22	Mr. A. H. Grant, C.S.I., C.I.E. .. .. .	Do.
23	Mr. G. B. H. Fell, C.I.E. .. .. .	Do.
24	Major-General A. H. Bingley, C.B., C.I.E. .. .. .	Do.
25	Mr. H. F. Howart, C.I.E. .. .. .	Do.
26	Sir James DuBoulay .. .. .	Do.
<b>(b) NON-OFFICIAL MEMBERS.</b>		
1	Sir Fazulbhoj Currimbhoj, Kt., C.I.F. .. .. .	Indian Commercial Community.
2	Khan Bahadur Mian Muhammad Shad, C.I.E. .. .. .	Muhammadan Community, Punjab.
3	Khan Zulfikar Ali Khan, C.S.I. .. .. .	Landholders, Punjab.
4	Sub-Major and Hon. Capt. Ajabkhan, Sardar Bahadur. .. .. .	.....

**Present Constitution of the Council.**

*I.—The whole Council.*

By the proviso to Regulation I for the Legislative Council of the Governor-General it is declared that it shall not be lawful for the Governor-General to nominate so many non-official persons that the majority of all the Members of the Council shall be non-officials.

**Officials—**

(a) Members of the Executive Council .. .. .	7
(b) The Lieutenant-Governor or Chief Commissioner of the Province (1) .. .. .	1
(c) Nominated Members .. .. .	27
<b>Total .. .. .</b>	<b>35</b>

**Non-Officials (2)—**

(a) Elected Members .. .. .	27
(b) Nominated Members .. .. .	5
<b>Total .. .. .</b>	<b>32</b>

<b>Official majority, exclusive of the Governor-General .. .. .</b>	<b>3</b>
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*II.—The Additional Members.*

The Indian Councils Act, 1861, section 10, provides that not less than one half of the Additional Members (exclusive of the Lieutenant-Governor or Chief Commissioner of the Province (1) in which the Council may for the time being be assembled) shall be non-officials.

(Present number of Additional Members { Officials (nominated) .. .. .	26
exclusive of the Lieutenant-Governor { Non-officials (elected and nominated) .. .. .	31
or Chief Commissioner (1) as aforesaid { Vacancies .. .. .	3
<b>Total .. .. .</b>	<b>60</b>

(For work of Imperial Legislative Council, Session 1915-16, p. v.)

# The Home Government.

The Home Government of India represents the gradual evolution of the governing board of the old East India Company. The affairs of the Company were originally managed by the Court of Directors and the General Court of Proprietors. In 1784 Parliament established a Board of Control, with full power and authority to control and direct all operations and concerns relating to the civil and military government, and revenues of India. By degrees the number of the Board was reduced and its powers were exercised by the President, the lineal precursor of the Secretary of State for India. With modifications this system lasted until 1858, when the Mutiny, followed by the assumption of the Government of India by the Crown, demanded a complete change. Under the Act of 1858 (now merged in the consolidating measure passed in 1915) the Secretary of State is the constitutional adviser of the Crown on all matters relating to India. He inherits generally all the powers and duties which were formerly vested either in the Board of Control, or in the Company, the Directors and the Secret Committee in respect of the Government and revenues of India. He has the power of giving orders to every officer in India, including the Governor-General, and is in charge of all business relating to India which is transacted in the United Kingdom.

## Secretary of State's Powers.

Of these wide powers and duties many rest on his personal responsibility; others can be performed only in consultation with his Council, and for some of these the concurrence of a majority of the members of his Council is required. The Secretary of State may act without consulting the Council in all matters where he is not expressly required by statute to act as "Secretary of State in Council." Appointments by the Crown are made on his advice. Every official communication proposed to be sent to India must be laid before Council, unless it falls under either of two reserved classes. One of these is "Secret communications" dealing chiefly with war and peace, relations with foreign Powers and Native States. The others are those which he may deem "urgent." No matter for which the concurrence of a majority of Council is necessary can be treated as either "secret" or "urgent." In ordinary business, for which the concurrence of a majority of Council is not required, the Secretary of State is not bound to follow the advice of the Council. These provisions reserve to the Secretary of State a wide discretionary power of interference with the Government of India which is exercised in accordance with the temperament of the Secretary of State for the time being. But in all matters of finance, the authority is that of the Secretary of State and the Council and is freely exercised.

## The Council.

The Council of India originally consisted of fifteen members appointed by the Secretary of State. By an Act passed in 1907 it now consists of such number of members, not being less than ten or more than fourteen, as the Secretary of State may from time to time determine. The members hold office for seven

years, and this term may, for special reasons of public advantage, which must be laid before Parliament, be extended for five years more. Nine members must be persons who have served or resided in India for at least ten years, and who have not left India more than five years before their appointment. Several of them have usually belonged to the Indian Civil Service, and have been lieutenant-governors of provinces or members of the Viceroy's Executive Council; others are soldiers, educationists, bankers, or men of diplomatic, official, or mercantile experience. The object aimed at in the constitution of the Council is to give the Secretary of State, who has little knowledge of the details of the Indian administration, the help of a body of experts. In 1907, in connection with the policy of constitutional reform, two Indians, one a Hindu and the other a Mahomedan, were appointed to vacancies in the Council. This practice is certain to be maintained. The present Indian members are a Mahomedan and a Sikh.

## The India Office.

Associated with the Secretary of State and the India Council is a secretariat known as the India Office, housed at Whitehall. The Secretary of State has two Under-Secretaries, one permanent, the other parliamentary, to whom some of his minor duties are delegated. Appointments to the establishment are made by the Secretary of State in Council, but "junior situations" must be filled in accordance with the general regulations governing admission to the Home Civil Service.

The whole cost of the India Office is borne by the revenues of India, though the Home Government makes certain grants and remissions in lieu of a direct contribution amounting to £50,000 a year. The total net cost, including pensions is about £250,000 per annum.

## Secretary of State.

The Right Hon. Austen Chamberlain, M.P.

## Under Secretaries of State.

Sir Thomas W. Holderness, K.C.B., K.C.S.I.  
The Right Hon. Lord Islington, G.C.M.G., D.S.O.

## Assistant Under Secretary of State.

Sir Lionel Abrahams, K.C.B.

## Council.

*Vice-President*, Laurence Currie.

Gen. Sir Charles C. Egerton, G.C.B.; D.S.O.  
(retires 5th February 1917.)

Abbas Ali Balg, C.S.I., LL.D., (retires 4th June 1917.)

Sir William Duke, K.C.S.I., K.C.I.E.

Sirdar Daljit Singh, C.S.I.

Sir Charles Arnold White.

Sir Murray Hamnlick, K.C.S.I., C.I.E.

Sir Charles S. Bayley, G.C.I.E., K.C.S.I., I.S.O.

William Bidsbury Sheppard, C.I.E.

Sir Marshall Frederick Reid, C.I.E.

*Clerk of the Council*, Sir Lionel Abrahams, K.C.B.

*Deputy Clerk of the Council*, James H. See-brooke, C.I.E.

*Private Secretary to the Secretary of State, Francis H. Lucas, C.B.*

*Assistant Private Secretary, J. Wilson.*

*Political A.-D.-C. to the Secretary of State, Lieut.-Col. Sir J. B. Dunlop Smith, K.C.S.I., K.C.V.O., C.I.E.*

*Private Secretary to Sir T. W. Holderness, C. H. Kisch.*

*Private Secretary to Lord Islington, C. H. Kisch.*

### Correspondence Departments.

#### SECRETARIES.

*Financial, F. W. Newmarch, C. S. I., and W. Robinson.*

*Judicial and Public, Malcolm C. C. Seton, C.B.*

*Military, Major-General Sir Herbert V. Cox, K.C.M.G., C.B., C.S.I., and J. H. Scabrooke, C.I.E.*

*Political and Secret, Sir A. Hirtzel, K.C.B.*

*Public Works, Hermann A. Haines.*

*Revenue and Statistics, L. J. Kershaw, C.I.E.*

*Director-in-Chief of the Indo-European Telegraph, Public Works Department, R. C. Barker, C.I.E.*

#### ACCOUNTANT-GENERAL'S DEPARTMENT:—

*Accountant-General, Walter Badock, C.S.I., also Director of Funds and Official Agent to Administrators-General in India.*

**STORE-DEPARTMENT—INDIA OFFICE BRANCH:—**  
*Director-General, George H. Collier.*

**INDIA STORE DEPOT, Belvedere Road, Lambeth, S. E. Superintendent, Captain G. T. Wingfield, R. N.**

**REGISTRY AND RECORD DEPARTMENT.—Registrar and Superintendent of Records, W. Foster, C.I.E.**

### Miscellaneous Appointments.

*Government Director of Railway Companies, Sir H. P. Burt, K.C.I.E.*

*Librarian, Fredk. W. Thomas, M.A., Hon Ph. D. (Munich).*

*Adviser to the Secretary of State for Indian Students, T. W. Arnold, C.I.E., Litt. D., M.A.*

*Local Adviser to Indian Students in London, Mr N. C. Sen (21, Cromwell Rd., S W.).*

*President of Medical Board for the Examination of Officers of the Indian Services and Adviser to the Secretary of State on Medical matters, Surg.-Gen. Sir R. H. Charles, C. V.O., M.D., I.M.S. (retd.), F.R.C.S.I.; Member of the Medical Board, Lt.-Col. J. Anderson, M.B., F.R.C.S. (retd.).*

*Legal Adviser and Solicitor to Secretary of State Sir S. G. Sale, K.C.I.E.*

*Inspector of Military Equipment and Clothing, Major-Gen. Sir John Steevens, K.C.B.*

*Surveyor and Clerk of the Works, T. H. Winny, A.B.I.B.A.*

*Ordnance Consulting Officer, Col. M.S.C. Campbell, C.I.E., R.A.*

*Officers of the Indian Army attached to the India Office—Colonels O. H. Selwyn, A. P. Harris and S. D. Gordon.*

*Consulting Engineer, Sir A. M. Rendel, K.C.I.E.*

*Stockbroker, Horace Hubert Scott.*

*Auditor, H. A. Cooper.*

### Secretaries of State for India.

	Assumed charge
Lord Stanley, P.C. (a) .. ..	1858
The Right Hon. Sir Charles Wood, Bart. (b) .. ..	1859
Earl de Grey and Ripon, P.C. (c) ..	1866
Viscount Cranborne (d) .. ..	1866
The Right Hon. Sir Stafford Northcote, Bart. (e) .. ..	1867
The Duke of Argyll, K.T., P.C. ..	1868
The Marquis of Salisbury, P.C. (2nd time) .. ..	1874
The Right Hon. Gathorne Hardy, P.C., created Viscount Cranbrook, 14 May, 1878 (f) .. ..	1878
The Marquis of Hartington, P.C. (g) ..	1880
The Earl of Kimberley, P.C. .. ..	1882
Lord Randolph Churchill, P.C. ..	1885
The Earl of Kimberley, K.G., P.C. (2nd time) .. ..	1886
The Right Hon. Sir Richard Assheton Cross, G.C.B., P.C., created Viscount Cross, 19 Aug., 1886 .. ..	1886
The Earl of Kimberley, K.G., P.C. (3rd time) .. ..	1892
The Right Hon. H. H. Fowler (h) ..	1894
Lord George F. Hamilton, P.C. ..	1895
The Right Hon. St. John Brodrick (i) ..	1903
The Right Hon. John Morley, O.M. (j) ..	1905
The Right Hon. The Earl of Crewe, K.G. .. ..	1910
The Right Hon. Viscount Morley of Blackburn, O.M. .. ..	1911
The Right Hon. The Earl of Crewe, K.G. (k) .. ..	1911
The Right Hon. Austen Chamberlain, M.P. .. ..	1913
(a) Afterwards (by succession) Earl of Derby.	
(b) " (by creation) Viscount Halifax.	
(c) " (by creation) Marquess of Ripon.	
(d) " (by succession) Marquess of Salisbury.	
(e) " (by creation) Earl of Idlesleigh.	
(f) " (by creation) Earl Cranbrook.	
(g) " (by succession) Duke of Devonshire.	
(h) " (by creation) Viscount Wolverhampton, G.C.S.I.	
(i) " (by succession) Viscount Midleton.	
(j) " (by creation) Viscount Morley of Blackburn, O.M.	
(k) " (by creation) Marquess of Crewe, K.G.	

## India Council Bill.

In July 1918 Lord Crewe, Secretary of State for India, outlined in the House of Lords certain ideas for the reform of the India Council. The purport of these changes was to reduce the number of the Council, and to substitute departments, with certain independent powers, for the Committees which discharge the detailed work of the Council. Nothing more was heard of this scheme until June 1914, when there was published the text of the amending Bill, with an explanatory memorandum thereon.

## Text of the Bill.

Appended is the full text of the Bill:—

1.—(1) The Council of India constituted under the Government of India Act, 1858 (which Act as amended by any subsequent enactment is hereinafter referred to as the principal Act), shall consist of such number of members, not less than seven nor more than ten, as the Secretary of State may from time to time determine.

(2) Unless at the time when an appointment is made to fill a vacancy in the Council two at least of the then existing members of the Council were at the time of their appointment domiciled in India, the person appointed to fill the vacancy must be domiciled in India, and unless at such time as aforesaid six at least of the then existing members were at time of their appointment either domiciled in India or were persons who had served or resided in India for at least ten years and had not ceased so to serve or reside more than five years before the date of their appointment, the person appointed to fill the vacancy must be either domiciled in India, or must have served or resided in India for at least ten years and have not ceased so to serve or reside more than five years before the date of his appointment.

The person appointed to fill a vacancy for which a person domiciled in India is alone eligible shall be selected from amongst the persons whose names appear on a list of persons domiciled in India chosen for the purpose by the members (other than official members) of the Legislative Councils of the Governor General, Governors, Lieutenant Governors and Chief Commissioners, in such manner, subject to such conditions and restrictions, and in such number, as may be prescribed by regulations to be made by the Secretary of State in Council, or by directions issued by the Secretary of State thereunder.

(3) The yearly salary to be paid to a member of the Council shall be one thousand two hundred pounds, provided that such members appointed after the commencement of this Act who at the date of their appointment shall be domiciled in India shall be paid an additional yearly allowance of six hundred pounds.

(4) Where the Secretary of State is of opinion that a person possessing special qualification as a financial expert should be appointed to be a member of the Council on special terms, he may, after recording in a minute to be laid before Parliament the special reasons for the appointment and the special terms on which the appointment is to be made, make the appointment, and the person so appointed shall, notwithstanding anything in the principal Act, or this Act, hold office

for such term and on such conditions, and shall in respect thereof be entitled to such salary and to such pension, and other rights and privileges (if any) as His Majesty may, by Order in Council, in each case determine.

Provided that not more than one person appointed under this provision shall be a member of the Council at the same time.

2.—(1) Notwithstanding anything in section nineteen of the principal Act, it shall not be necessary for an order or communication sent to India or an order in the United Kingdom in relation to the government of India to be signed by a Secretary of State in such cases as the Secretary of State in Council may otherwise direct, but every such order and communication shall purport to be made by the Secretary of State in Council.

(2) For section twenty of the principal Act (which relates to the powers of the Secretary of State to divide the Council into committees, and to regulate the transaction of business in Council) the following section shall be substituted:—

It shall be lawful for the Secretary of State in Council to make rules and orders for the transaction of business as regards the powers which under the principal Act are to be exercised by the Secretary of State in Council:

“Provided that any such rule or order, so far as it affects any matter or question in respect of which the concurrence of a majority at a meeting of the Council is required by this Act, shall not be valid unless made with the concurrence of a majority of the members of Council present at the meeting of Council at which the rule or order is passed.”

(3) Such rules and orders as aforesaid may, notwithstanding anything in sections twenty-two, twenty-four, twenty-five, and twenty-six of the principal Act, provide, as respects such matters as may be specified in the rules and orders,—

(a) for enabling powers of the Secretary of State in Council to be exercised otherwise than at a meeting of the Council, and where necessary for that purpose, for dispensing with any requirement of the principal Act as to the occurrence of the majority of votes of members of Council;

(b) for dispensing with the necessity of submitting to Council or depositing in the Council Room for the perusal of members, orders and communications proposed to be sent to India or to be made in the United Kingdom by the Secretary of State, and of recording and notifying to members of Council the grounds on which any order or communication to India has been treated as urgent.

(4) At a meeting of the Council the quorum shall be three, and meetings of the Council shall be convened and held when and as the Secretary of State may from time to time direct.

(5) Any document required by the principal Act to be signed by two or more members of the Council, either with or without the counter-signature of the Secretary of State, or one of his Under Secretaries or Assistant Under Secretaries

may be signed in such manner as the rules and orders made by the Secretary of State in Council for the transaction of business in his Council may prescribe, and any such document if signed in accordance with such rules and orders, shall be as valid as if it had been signed in accordance with the provisions of the principal Act.

(6) Section twenty-seven of the principal Act (which enables the Secretary of State to send certain secret orders without communicating them to the members of his Council) shall extend to any order, not being an order in respect of which concurrence of a majority at the meeting of the Council is required by the principal Act, which relates to any question gravely affecting the internal tranquillity of India, or the interests of India in any other country, or the peace or security of any part of His Majesty's Dominions, and which in the opinion of the Secretary of State is of the nature to require secrecy, and it is further declared that the said section shall apply to any order which the Secretary of State may send in reply to a despatch received and dealt with by him under section twenty-eight of the principal Act.

(7) All rules and orders made under this section shall be laid before Parliament as soon as may be after they are made, and if an address is presented to His Majesty by either House of Parliament within the next subsequent thirty days on which that House has sat after any such rule or order is laid before it praying that the rule or order may be annulled His Majesty in Council may annul the rule or order and it shall henceforth be void but without prejudice to the validity of anything previously done thereunder.

### The Bill Explained.

The publication of the Bill was accompanied by a memorandum explaining its provisions in the following terms—

The object of this Bill is to amend the Government of India Act 1858. The Act of 1858 in transferring the Government of India to the Crown, created the Council of India defined its powers and those of the Secretary of State and prescribed in great detail the procedure to be followed in the transaction of business.

The Act of 1858 has as regards the numerical strength of the Council and the conditions of office on it, been amended several times. The procedure for the transaction of business is practically unaltered.

By the Act of 1858 the strength of the Council was fixed at fifteen members, of whom not less than nine were to be persons who at the time of appointment had served or resided in India for ten years and had not last left India more than ten years. The members were to hold office during good behaviour but were removable upon an address of both Houses of Parliament. Their salary was fixed at £1,200 a year.

These provisions have since been altered. The Council now consists of such number of members, not less than ten and not more than fourteen, as the Secretary of State may from time to time determine. Nine members must be persons who at the time of appointment had served or resided in India for ten years, and had not last left India more than five years. The terms of office is limited to seven years but the

Secretary of State may re-appoint a member for a further period of five years. The salary is £1,000 a year. Since 1907 it has been the recognised practice of the Secretary of State to reserve two appointments on the Council for Indians.

The procedure for the transaction of business established by the Act of 1858 cannot be varied by rules. The powers of the Secretary of State in Council may be exercised only at meetings of the Council. A Council must be held every week and a quorum of five members is required. In certain matters, however trivial in themselves, the sanction of a majority of votes at a meeting is required. In other matters the Secretary of State may act alone but except in cases where secrecy or urgency can be claimed, his proposed order must lie a week on the Council table before it is sent. The Act contemplates that all business before coming to the Council should be dealt with in Committee, and the Council is divided for this purpose into several Standing Committees.

It is proposed by Clause 1 of the Bill to make certain changes in the strength and composition of the Council, and in the emoluments of the members. Also to take power to make rules for simplifying the business procedure of the Council.

With a simplified procedure much of the unimportant work that now occupies the time of the Standing Committees and the Council would be disposed of by the Secretary of State in communication with and with the assistance of individual members. Committees being specially nominated by him when required. A council of ten to fourteen members would then be needlessly large. It is proposed to fix the number at seven to ten, and to return to the rate of salary (£1,200 a year) allowed by the Act of 1858.

It is further proposed to convert the present practice of appointing two Indians to the Council into a statutory requirement to provide that they shall be chosen from names submitted by Indian Legislative Councils, and to grant to them an allowance of £100 a year in addition to salary in view of the expense of residing out of their own country.

Provision is also made to enable the Secretary of State to appoint to the Council a financial member on special terms as to salary, pension and tenure of office. The necessity for an exceptional power of this kind has been recognised by the Royal Commission on Indian Currency.

Clause 2 of the Bill provides for the simplification of business procedure. It enables the Secretary of State in Council to make rules to modify the procedure prescribed by the Act of 1858. The rules as and when made are to be laid before Parliament. The requirement of a weekly meeting of the Council is also dispensed with and the quorum reduced. The opportunity is taken to enlarge in a way which experience has shown to be desirable the category of cases which may be dealt with by the Secretary of State in his "Secret" Department without informing or consulting his Council.

On the motion of Lord Curzon the House of Lords rejected the Bill by 96 votes to 88.

## The Provincial Governments.

British India is divided into eight large provinces and six lesser charges, each of which is termed a Local Government. The eight major provinces are the Presidencies of Madras, Bombay, and Bengal; the Lieutenant-Governorships of the United Provinces, The Punjab, Burma, and Behar; and the Chief Commissionership of the Central Provinces. The minor provinces are Assam, the North-West Frontier Province, Baluchistan, Coorg, Ajmere Merwara and the Andaman Islands. The original division of British authority in India was between the Presidencies of Bengal, Madras and Bombay. Bengal afterwards developed into and was separated from the Government of India and then was gradually divided into provinces as the tide of conquest brought under administration areas too large to be controlled by a single authority. The status and area of these provinces have been varied from time to time to meet the changed conditions of the day. The most recent of these changes was the separation of the North-West Frontier from the Punjab in 1901; the division of Bengal into two provinces in 1905; and the final adjustment made in accordance with His Majesty the King's announcement at the Durbar of 1911, whereby the newly-created province of Eastern Bengal and Assam disappeared, and Bengal was re-divided into the Presidency of Bengal, the Lieutenant-Governorship of Behar and Orissa, and the Chief Commissionership of Assam, whilst the headquarters of the Government of India were moved from Calcutta to Delhi, and the City of Delhi, with an *enclave* of territory surrounding it, was taken under the direct administration of the Government of India. All Local Governments alike are under the superintendence and control of the Governor-General in Council. They must obey orders received from him, and they must communicate to him their own proceedings. But each Local Government is the Executive head of the administration within the province. By custom, all appointments to Local Governments are for a term of five years.

### The Three Classes.

The three Presidencies occupy a superior position. The Civil administration of each is vested in a Governor-in-Council, appointed by the Crown, and usually drawn from English public life. On certain matters they correspond directly with the Secretary of State, a privilege not possessed by other provincial Governments. The Governors are assisted by a Council composed of three members, two members of the Civil Service and, under the Indian Councils Act of 1909, a fourth member who is usually an Indian. Like the Governor-General they are addressed as Your Excellency, and they are escorted by a body-guard. The maximum salaries as fixed by Act of Parliament are Rs. 1,20,000 for a Governor and Rs. 64,000 for a member of Council.

Lieutenant-Governors are appointed by the Governor-General subject to the approbation of the Crown. They must have served for at least ten years in India. Under the Indian Councils Act power was taken to create executive councils in the Lieutenant-Governorships and this has been applied to Behar where the Lieutenant-Governor is assisted by a Coun-

cil consisting of two members of the Civil Service and one Indian. Lieutenant-Governors are addressed as Your Honour. Their maximum salary, Rs. 1,00,000, is fixed by Act of Parliament.

Chief Commissioners stand upon a lower footing, being delegates of the Governor-General-in-Council. In theory, a Chief Commissioner administers his province on behalf of the Governor-General-in-Council, who may resume or modify the powers that he has himself conferred. In practice, the powers entrusted to Chief Commissioner of the Central Provinces are as wide as those exercised by a Lieutenant-Governor. The salary of a Chief Commissioner is Rs. 50,000 but in the case of the Central Provinces this was raised to Rs. 62,000 in consideration of the addition of Berar to his Government.

### Provincial Councils.

The changes made in the constitution and non-legislative functions of the Legislative Councils of Madras and Bombay by the Act of 1909 more than doubled the number of members, election by specially constituted electorates was introduced, and powers were given to members to debate and move resolutions on the provincial financial statements, to move resolutions on matters of general public interest, and to ask supplementary questions. A description of the system in Bombay will show how the scheme works. The Bombay Legislative Council is composed of four ex-officio members (the three members of the Executive Council and the Advocate-General) and 44 additional members. Of the additional members the Governor nominates twenty-three (of whom not more than fourteen may be officials) and 21 are elected. The Government is thus without a majority of officials in the Council. Of the elected members, eight are elected by groups of municipalities and the District Boards, four by Mahomedan electorates, and three by electorates of the land-holding classes. The Bombay University, the Bombay Municipal Corporation, the Bombay Chamber of Commerce, the Karachi Chamber of Commerce, and the Mill-owner's Association, and the Indian Commercial Community, each elect one member. The regulations for the formation of electorates, and as to the qualifications and disqualifications of candidates and voters, are similar to those made in the case of the Supreme Council.

The rules for the discussion of the annual financial statement are similar to those applicable to the Supreme Council. The Financial Statement is presented and considered as a whole and then in detail, and resolutions may be moved. The Government is not bound by any resolutions which the Council may pass. Matters of general public interest under the control of Local Governments may be made the subject of resolutions. Laws passed by these Legislative Councils require the sanction of the Governor-General and may be disallowed by the Crown.

In constitution, in functions, and in the system of special electorates, the Legislative Councils in the Lieutenant-Governorships resemble in all the essential particulars the Legislative Council of Bombay.

### The Secretariat.

Each Local Government works through a Secretariat, which is divided into various departments, each under a Secretary. In addition to the Secretaries, there are special departmental heads such as the Inspectors General of Police, Jails, and Registration; the Director of Public Instruction, the Inspector-General of Civil Hospitals or Surgeon-General, the Sanitary Commissioner and the Superintendent of the Civil Veterinary Department. There are also Chief Engineers for Public Works and Irrigation, who are likewise Secretaries to Government. In nearly all the Provinces except Bombay, the revenue departments are administered, under Government, by a Board of Revenue.

### The District Officer.

The administrative system is based on the repeated sub-division of territory, each administrative area being in the responsible charge of an officer who is subordinate to the officer next in rank above him. The most important of these units is the District, and India embraces more than 250 Districts, with an average area of 4,430 square miles and an average population of 931,000. In Madras there is no local officer above the head of the District; elsewhere a Commissioner has the supervision of a Division comprising from four to six Districts. The head of a District is styled either the Collector and District Magistrate or the Deputy Commissioner. He is the representative of the Government and embodies the power of the State. He is concerned in the first place with the land and the land revenue. He has also charge of the local administration of the excise, income tax, stamp duty and other sources of revenue. As a Magistrate of the first class, he can imprison for two years and fine up to a thousand rupees. In practice he does not try many criminal cases, although he supervises the work of the other Magistrates in the District.

In addition to these two main departments, the Collector is interested in all matters pertaining to the welfare of the people. In some branches of the administration his functions are, in consequence of the formation of special departments, such as those of Public Works, Forests, Jails, Sanitation, and Education less direct than was formerly the case. But even in matters dealt with by separate departments, his active co-operation and direction in counsel are needed. The Municipal Government of all considerable towns is vested in Municipalities but it is the duty of the Collector to guide and control their working. He is usually the Chairman of the District Board which, with the aid of subsidiary boards, maintains roads, schools and dispensaries, and carries out sanitary improvements in rural areas.

### Other Officers.

Other important district officers are the Superintendent of Police, who is responsible for the discipline and working of the police force, and the Civil Surgeon, who (except in Bombay) is the head of the medical and sanitary administration. The local organisation of Government Public Works, Forests, Education and other special departments varies in different parts of the country. Each District has its own law officer, styled the Government Pleader.

The Districts are split up into sub-divisions, under Junior Officers of the Indian Civil Ser-

vices or members of the Provincial Service called Deputy Collectors. In Madras, Bombay and the United Provinces there are smaller sub-district units called taluks or tahsils, administered by tahsildars (Bombay Mamlatdars), with naib tahsildars or mahalkarris. The tahsildar is assisted by subordinate officers styled revenue inspectors or kanungos and the village officers. The most important of the latter are the headman who collects the revenue, the karnam, karkun or patwari who keeps the village accounts, and the chaukidar or village watchman.

### Trend of Provincial Government.

The relations of the Provincial administrations with the Government of India form the subject of incessant discussion. On the one side there are the strong centralisers who would focus all authority in the Government of India; on the other those stout advocates of provincial autonomy who would make the Local Governments virtually independent of the Government of India. The trend of Indian policy since the departure of Lord Curzon has been steadily in the direction of increasing the authority of the Provincial Governments and the control and interference of the Government of India has been materially reduced, especially in financial matters. There was a marked development of this policy adumbrated in the despatch of the Government of India which submitted to the Secretary of State the proposal to remove the headquarters of the Government of India from Calcutta to Delhi. This paragraph thus indicated the ideas of the supreme authorities; although the extreme interpretation placed upon it by some Indian publicists had to be repudiated, it remains the most authoritative exposition of the trend of Indian policy.

The maintenance of British rule in India depends on the ultimate supremacy of the Governor-General in Council, and the Indian Councils Act of 1909, itself bears testimony to the impossibility of allowing matters of vital concern to be decided by a majority of non-official votes in the Imperial Legislative Council. Nevertheless it is certain that, in the course of time, the just demands of Indians for a larger share in the government of the country will have to be satisfied, and the question will be how this devolution of power can be conceded without impairing the supreme authority of the Governor-General in Council. The only possible solution of the difficulty would appear to be gradually to give the Provinces a larger measure of self-Government, until at last India would consist of a number of administrations, autonomous in all provincial affairs, with the Government of India, above them all, and possessing power to interfere in case of misgovernment, but ordinarily restricting their functions to matters of Imperial concern. In order that this consummation may be attained, it is essential that the supreme Government should not be associated with any particular Provincial Government. The removal of the Government of India from Calcutta is, therefore, a measure which will, in our opinion, materially facilitate the growth of Local Self-Government on sound and safe lines. It is generally recognised that the capital of a great central Government should be separate and independent, and effect has been given to this principle in the United States, Canada and Australia."



## Administrative Divisions.

Provinces.	No. of Districts.	Area in Square miles.	Population (1911).
Ajmer Merwara .. .. .	2	2,711	501,395
Andamans and Nicobars .. .. .	....	3,143	26,459
Assam .. .. .	12	52,959	6,713,635
Baluchistan .. .. .	6	45,804	414,412
Bengal .. .. .	28	78,412	45,483,077
Bihar and Orissa .. .. .	21	83,205	34,490,084
Bombay (Presidency) .. .. .	26	123,064	19,672,642
Bombay .. .. .	26	75,918	16,113,042
Sind .. .. .	6	47,066	3,513,435
Aden .. .. .	....	80	46,165
Burma .. .. .	41	236,738	12,115,217
Central Provinces and Berar .. .. .	22	100,315	13,916,308
Coorg .. .. .	1	1,582	174,976
Madras .. .. .	24	141,726	41,405,404
North-West Frontier Province ( Districts and administered Territories)	5	16,466	2,196,933
Punjab .. .. .	29	97,200	19,974,956
United Provinces of Agra & Oudh .. .. .	48	107,164	47,182,044
Agra .. .. .	36	83,198	34,624,040
Oudh .. .. .	12	23,966	12,558,004
Total British Territory .. .. .	267	1,007,901	244,267,542

States and Agencies.	No. of Districts.	Area in Square miles.	Population (1911).
Baluchistan States .. .. .	....	86,511	396,432
Baroda State .. .. .	....	8,090	2,032,798
Bengal States .. .. .	....	32,773	4,534,161
Bombay States .. .. .	....	65,761	7,411,567
Central India Agency .. .. .	....	78,772	9,346,680
Central Provinces States .. .. .	....	31,188	2,117,002
Eastern Bengal and Assam States .. .. .	....	....	575,835
Hyderabad State .. .. .	....	82,698	13,374,676
Kashmir State .. .. .	....	80,900	3,158,126
Madras States .. .. .	....	9,969	4,811,841
Cochin State .. .. .	....	....	918,110
Travancore State .. .. .	....	....	8,428,975
Mysore State .. .. .	....	20,444	5,806,193
North-West Frontier Province ( Agencies and Tribal areas )	....	....	1,022,094
Punjab States .. .. .	....	36,532	4,212,794
Rajputana Agency .. .. .	....	127,541	10,530,432
Sikkim .. .. .	....	....	87,920
United Provinces States .. .. .	....	5,079	832,036
Total Native States .. .. .	....	675,267	70,864,995
Grand Total, India .. .. .	....	1,773,168	315,132,537

## The Bombay Presidency.

The Bombay Presidency stretches along the west coast of India, from Sind in the North to Kanara in the South. It embraces, with its feudatories and Aden, an area of 186,924 square miles and a population of 27,081,317. Of this total 65,761 square miles are in Native States, with a population of 7,411,875. Geographically included in the Presidency but under the Government of India is the first class Native State of Baroda, with an area of 8,182 square miles and a population of 2,032,798. The outlying post of Aden is under the jurisdiction of the Bombay Government: It has an area of 30 square miles and a population of 46,165.

The Presidency embraces a wide diversity of soil, climate and people. In the Presidency Proper are the rich plains of Gujarat, watered by the Nerbudda and the Tapti, whose fertility is so marked that it has long been known as the Garden of India. South of Bombay City the province is divided into two sections by the Western Ghats, a range of hills running parallel to the coast. Above Ghats are the Deccan Districts, with a poor soil and an arid climate, south of these come the Karnatic districts. On the sea side of the Ghats is the Konkan, a rice-growing tract, intercepted by creeks which make communication difficult. Then in the far north is Sind, totally different from the Presidency Proper, a land of wide and monotonous desert except where irrigation from the Indus has brought abounding fertility.

### The People.

The population varies as markedly as soil and climate. In Sind Mahomedans predominate. Gujarat has remained true to Hinduism although long under the dominion of powerful Mahomedan kings. Here there is an amplitude of caste divisions, and a people, who although softened by prosperity, are amongst the keenest trading races in the world. The Deccan peasant has been seasoned by adversity; the saying goes that the Deccan expects a famine one year in every three, and gets it; the population is much more homogeneous than in Gujarat, and thirty per cent. are Mahrattas. The Karnatic is the land of the Lingayets, a Hindu reforming sect of the twelfth century, and in the Konkan there is a large proportion of Christians. Four main languages are spoken, Sindi, Gujarati, Marathi and Kanarese, with Urdu a rough *lingua franca* where English has not penetrated. The main castes and tribes number five hundred.

### Industries.

The principal industry is agriculture, which supports sixty-four per cent. of the population. In Sind the soils are wholly alluvial, and under the influence of irrigation produce yearly increasing crops of wheat and cotton. In Gujarat they are of two classes, the black cotton soil, which yields the famous Broach cottons, the finest in India, and alluvial, which under careful cultivation in Ahmedabad and Kaira makes splendid garden land. The dominant soil characteristic of the Deccan is black soil, which produces cotton, wheat, gram and millet, and in certain tracts rich crops of sugar cane. The Konkan is a rice land, grown under the abundant rains of the submontane regions, and in the south the Dharwar cotton vies with Broach as the best in India. There

are no great perennial rivers suitable for irrigation, and the harvest is largely dependent upon the seasonal rainfall, supplemented by well irrigation. A chain of irrigation works, consisting of canals fed from great reservoirs in the region of unfailing rainfall in the Ghats, is gradually being completed, and this will ultimately make the Deccan immune to serious drought. More than any other part of India the Presidency has been scourged by famine and plague during the past twenty years. The evils have not been unmitigated, for tribulation has made the people more self-reliant, and the rise in the values of all produce, synchronising with a certain development of industry, has induced a considerable rise in the standard of living. The land is held on what is known as the ryotwari tenure, that is to say, each cultivator holds his land direct from Government under a moderate assessment, and as long as he pays this assessment he cannot be dispossessed.

### Manufactures.

Whilst agriculture is the principal industry, others have no inconsiderable place. The mineral wealth of the Presidency is small, and is confined to building stone, salt extracted from the sea, and a little manganese. But the handicrafts are widely distributed. The handloom weavers produce brightly coloured saris, and to a diminishing extent the exquisite kincobs of Ahmedabad and Surat. Bombay silver ware has a place of its own, as well as the brass work of Poona and Nasik. But the tendency is to submerge the indigenous handicrafts beneath industry organised on modern lines. Bombay is the great centre in India of the textile trade. This is chiefly found in the headquarter city, Bombay, where the industry embraces 29,94,367 spindles and 51,846 looms and employs 1,11,924 hands and consumes 33,91,175 cwts. of cotton. This industry is now flourishing, and is steadily rising in efficiency. In lieu of producing immense quantities of low grade yarn and cloth, chiefly for the China market, the Bombay mills now turn out printed and bleached goods of a quality which improves every year, and the principal market is at home. Whilst the industry centres in Bombay City, there are important offshoots at Ahmedabad, Broach and Sholapur. In Ahmedabad there are 10,17,800 spindles and 21,508 looms; in Sholapur 2,37,839 spindles and 3,730 looms; and in the Presidency 48,03,932 spindles and 85,388 looms. It is expected that the prosperity of the Bombay trade will be quickened, as a project, now in operation, for the substitution of electricity for steam—the electricity is generated at a hydro-electric station in the Ghats, fifty miles distant—furnishes cheap and efficient power. Its situation on the western-sea-board, in touch at once with the principal markets of India and the markets of the west, has given Bombay an immense sea-borne trade. The older ports, Surat, Broach, Cambay and Mandvi, were famous in the ancient days, and their bold and hardy mariners carried Indian commerce to the Persian Gulf and the coasts of Africa. But the opening of the Suez Canal and the increasing size of ocean steamers have tended to concentrate it in modern ports with deep water anchor-



Under them are Superintending Engineers in charge of divisions and Executive Engineers in charge of districts, with the Consulting Architect. The chief irrigation works are in Sind and consist of a chain of canals fed by the annual inundations from the Indus and one perennial canal the Jamrao. In the Presidency proper the principal protective works are the Nera Canal, Gokak Canal, Mutha Canal and the Godavari Canal &c. In addition there is under construction a chain of protective irrigation works, originating in reservoirs in the Ghat regions. The first of these the Godavari Scheme, is now in operation, the Pravara Scheme and the Nira Scheme are progressing steadily. The Public Works budget for the current year is 77.5 lakhs of rupees.

### Police.

The Police Force is divided into three categories: District Police, Railway Police and the Bombay City Police. The District Police are under the Inspector-General who is either a member of the Gazetted Force or a Covenanted Civilian. Under him are the Deputy Inspector-Generals for Sind and the Northern and Southern Ranges of the Presidency proper, for Railways and for Criminal Investigation. District Superintendents of Police have charge of each District with a regular cadre comprising Assistant Superintendents, Sub-Inspectors, Chief Constables and Constables. The Bombay City Police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Training School at Nasik prepares young gazetted officers and the rank and file for their duties. The cost of the Police is 110 lakhs.

### Education.

Education is imparted partly through direct Government agency, partly through the medium of grants-in-aid. Government maintain Arts Colleges at Bombay, Poona and Gujarat; the Grant Medical College, the Poona College of Science, the Agricultural College, Veterinary College, School of Art, Law School and a College of Commerce. A Science College in Bombay is now in course of construction. Also in Bombay City, and the headquarters of each district, a model secondary school. The other secondary schools are in private hands; the majority of the primary schools are maintained by District and Local Boards with a grant-in-aid. The Bombay Municipality is responsible for primary education in Bombay City. There are now in the Presidency 7 Arts Colleges, 4,702 scholars, 142 High Schools; 42,215 Scholars, 323 Middle Schools, 25,934 Scholars and 10,800 Primary Schools, 6,70,141 Scholars. The Government Educational Budget is 77.54 lakhs.

The Educational Department is administered by a Director, with an Inspector in each Division and a Deputy Inspector with Assistants in each district. Higher education is controlled by the Bombay University (established in 1857) consisting of the Chancellor (the Governor of the Presidency), the Vice-Chancellor (appointed by Government for two years), and 110 Fellows of whom 10 are ex-officio; 10 elected by the Graduates, 10 by the Faculties, and 80 are nominated by the Chancellor.

The principal educational institutions are:—

#### Government Arts Colleges—

Elphinstone College, Bombay, Principal Govindron  
Deccan College, Poona, Principal Mr. F. W. Bain.  
Gujarat College, Ahmedabad, Principal the Rev W. G. Robertson.

#### Private Arts Colleges—

St. Xavier's, Bombay (Society of Jesus), Principal Rev. Father Goolier.  
Wilson College, Bombay (Scottish Mission), Principal Rev. Dr. Mackichan.  
Ferguson College, Poona (Deccan Educational Society), Principal the Hon'ble Mr. R. P. Paranjpe.  
Baroda College, Baroda (Baroda State), Principal Mr. Clarke.  
Samaldas College, Bhavnagar (Bhavnagar State), Principal Mr. Unwalla.  
Bahaduddinbhai College, Junagadh State, Principal Mr. Scott.

#### Special Colleges—

Grant Medical College, Bombay (Government), Principal Lt.-Col. Street, I.M.S.  
College of Science, Poona (Government), Principal Dr. Ailen.  
Agricultural College, Poona (Government), Principal Dr. Harold Mann.  
Chiefs' College, Rajkot, Principal Mr. Mayne.  
College of Science, Ahmedabad.  
Law School, Bombay, Principal, Mirza Ali Akbar Khan  
College of Commerce, Bombay, Principal, Mr. P. Anstey.  
Veterinary College, Bombay, Mr. K. Hewlett.  
Bombay Bacteriological Laboratory, Director: Major Liston, I.M.S.  
Sir J. J. School of Art, Bombay (Government), Principal Mr. Cecil Burns.  
Victoria Technical Institute, Bombay, Principal Mr. T. Dawson.

### Medical.

The Medical Department is in charge of the Surgeon-General and Sanitation of the Sanitary Commissioner, both members of the Indian Medical Service. Civil Surgeons stationed at each district headquarters are responsible for the medical work of the district, whilst sanitation is entrusted to one of the Deputy Sanitary Commissioners. Three large hospitals are maintained by the Government in Bombay, and well-equipped hospitals exist in all important up-country stations. Over four million persons including 87,000 in-patients are treated annually. The Presidency contains 7 Lunatic Asylums and 16 institutions for the treatment of Lepers. Vaccination is carried out by a staff under the direction of the Sanitary Commissioner. Sanitary work has received an immense stimulus from the large grants made by the Government of India out of the opium surpluses. The Budget is 27.38 lakhs.

#### Governor and President in Council.

His Excellency The Right Hon'ble Freeman Freeman-Thomas Baron Willingdon of Ratton G.C.I.E. Took his seat 5th April 1913.

#### Personal Staff.

J. Cresser, I.C.S., J.P., Private Secy.  
Major J. G. Gray, C.I.E., 121st Pioneer, Military Secy.

**Captain Rigby, R.A.M.C., Surgeon to H. E. the Governor.**

**Capt. A. K. McEwan, 225th Brigade, R.F.A., Aide-de-Camp.**

**The Earl of Lathom Captain Studd, Lt. G. A. Laverton, 2nd/4th Battalion, Extra Aides-de-Camp.**

**Captain Greenway, 26th Cavalry, Offg. Comd., H. E. the Governor's Body Guard**

**Subadar-Major Balkrishna Rao, 110th Mahrattas, Indian Aide-de-Camp.**

#### *Members of Council.*

**Mr. George Carmichael, C.S.I., I.C.S.**

**Mr. G. S. Curtis, C.S.I., I.C.S.**

**Mr. Mahadev Bhaskar Chaubal, C.S.I., B.A., LL.B.**

#### *Additional Members of Council Elected.*

**Mr. D. V. Belvi, B.A., LL.B. Elected by the Municipalities of the Southern Division.**

**Mr. G. M. Bhurgri, Bar-at-Law. Elected by the Jaghirdars and Zamindars of Sind.**

**Mr. Sidhanath Dhonedeo Garud.**

**Sardar Syed Ali El Edroos. Elected by the Muhammadan Community of the Northern Division.**

**Mr. Chunilal V. Mehta, M.A., LL.B.**

**Shalkh G. H. Hidayatallah, LL.B. Elected by the District Local Boards of the Sind Division.**

**Sardar Shrinivas Coopposwami Mudaliar.**

**Mr. William Underwood Nicholas.**

**Mr. G. K. Parekh, B.A., LL.B. Elected by the Municipalities of the Northern Division.**

**Mr. V. J. Patel, Bar-at-Law. Elected by the District Local Boards of the Northern Division.**

**Mr. Baghunath Purushottam Paranjpye.**

**Mr. Abdul Kadir alias Fakir Mohd. rabad Ibrahim Khan.**

**Sardar Dulabawa Raisingji, Thakor of Kerwada. Elected by the Sardars of Gujarat.**

**Mr. Manmohandas Ramji. Elected by the Indian Commercial Community.**

**Mr. Malcolm N. Hong. Elected by the Bombay Chamber of Commerce.**

**Sir Dinshaw Maneckjee Petit, Bart.**

**Mr. Harchandrai Vishindas, B.A., LL.B.**

**Mr. Sheriff Devji Kanji.**

**Mr. Pandurang Anant Desai.**

#### *Nominated.*

**The Advocate-General (ex-officio).**

**IA-Col. James Jackson, M.B., I.M.S.**

**Mr. S. B. Arthur.**

**Mr. Salebhai Karimji Darodawala.**

**Mr. P. B. Cadell.**

**Dr. Cajetan Fernandes.**

**Mr. B. S. Kamat.**

**Mr. J. D. Jenkins.**

**Mr. G. F. Keatinge.**

**Mr. Henry Stavelay Lawrence, I.C.S.**

**Mr. Lalubhai Samaldas Mehta, C.I.E.**

**Mr. J. P. Orr, C.S.I., I.C.S.**

**Rao Bahadur V. S. Naik.**

**Khan Bahadur Pir Bakhsh wadal Mian Muhammad.**

**Sir Prabhashankar D. Pattani.**

**Mr. Frederick G. Pratt, I.C.S.**

**Mr. Phiroze C. Sethna.**

**Rao Bahadur G. K. Sathu.**

**Mr. W. H. Sharp.**

**Mr. Purushotamdas Thakurdas.**

**Surgeon-General R. W. S. Lyons.**

**Rao Bahadur Tekchand Udhavdas.**

#### SECRETARIES TO GOVERNMENT.

**Political, Special and Judicial.—L. Robertson, I.C.S.**

**J. E. C. Jukes, I.C.S., Dy. Secretary. Judicial and Political Departments (Temporary).**

**Revenue, Financial and Separate.—The Hon'ble Mr. Patrick Robert Cadell, C.I.E., I.C.S.**

**General, Educational, Marine and Ecclesiastical.—P. W. Monie.**

**Legal Department and Remembrancer of Legal Affairs.—George Douglas French, B.A., I.C.S.**

**Public Works Department.—H. F. Beale, and E. J. Kent (Joint Secretary.)**

#### MISCELLANEOUS APPOINTMENTS (S. C.)

**Advocate-General, The Hon. Mr. T. J. Strangman.**

**Inspector-General of Police, W. L. Berkeley Souter, C.I.E.**

**Director of Public Instruction, The Hon. Mr. W. H. Sharp.**

**Surgeon-General, The Hon. Surgeon-General R. W. S. Lyons, I.M.S.**

**Oriental Translator, Muhammad Kadir Shalkh.**

**Talukdari Settlement Officer, R. G. G. Gordon, I.C.S.**

**Settlement Commissioner and Director of Land Records, C. N. Seddon, I.C.S.**

**Director of Agriculture and Co-operative Societies G. F. Keatinge, C.I.E.**

**Registrar of Co-operative Societies, R. B. Ewbank.**

**Municipal Commissioner, Bombay, S. M. Edwards, C.V.O., I.C.S. P. W. Monie (Actg.).**

**Vice-Chancellor, Bombay University, The Rev. Dr. Mackichan.**

**Registrar, Bombay University, Fardunji Dastur.**

**Commissioner of Police, Bombay, F. A. M. Vincent, C.V.O.**

**Sanitary Commissioner, Major F. H. G. Hutchinson.**

**Accountant-General, E. M. Cook, I.C.S.**

**Inspector-General of Prisons, Lt.-Col. J. Jackson, I.M.S.**

**Postmaster-General, H. S. H. Pilkington, M.V.O.**

**Commissioner of Customs, Salt, Opium and Excise, S. B. Arthur.**

Major of Customs, Bombay, F. W. Whitty.  
 Consulting Architect, G. W. Wittet.  
 Consulting Surveyor, A. E. Mirams, F.R.I.

GOVERNORS OF BOMBAY.

Abraham Shipman .. ..	1662
Died on the island of Anjediva in October	1664
Mumfrey Cooke .. ..	1665
Sir Gervase Lucas .. ..	1666
Died, 21st May, 1667.	
Captain Henry Garey ( <i>Officiating</i> ) ..	1667
Sir George Oxenden .. ..	1668
Died in Surat, 14th July, 1669.	
Gerald Aungler .. ..	1669
Died in Surat, 30th June, 1677.	
Thomas Rolt .. ..	1677
Sir John Child, Bart. .. ..	1681
Bartholomew Harris .. ..	1690
Died in Surat, 10th May, 1694.	
Daniel Annesley ( <i>Officiating</i> ) .. ..	1694
Sir John Gayer .. ..	1694
Sir Nicholas Waite .. ..	1704
William Aislabie .. ..	1708
Stephen Strutt ( <i>Officiating</i> ) .. ..	1715
Charles Boone .. ..	1715
William Phipps .. ..	1722
Robert Cowan .. ..	1729
Dismissed.	
John Horne .. ..	1734
Stephen Law .. ..	1739
John Geekie ( <i>Officiating</i> ) .. ..	1742
William Wake .. ..	1742
Richard Bouchier .. ..	1750
Charles Crommelin .. ..	1760
Thomas Hodges .. ..	1767
Died, 23rd February, 1771.	
William Hornby .. ..	1771
Rawson Hart Boddam .. ..	1784
Rawson Hart Boddam .. ..	1785
Andrew Ramsay ( <i>Officiating</i> ) .. ..	1788
Major-General William Medows .. ..	1788
Major-General Sir Robert Abercromby, K.C.B. (a)	1790
George Dick ( <i>Officiating</i> ) .. ..	1792
John Griffith ( <i>Officiating</i> ) .. ..	1795
Jonathan Duncan .. ..	1795
Died, 11th August, 1811.	
George Brown ( <i>Officiating</i> ) .. ..	1811
Sir Evan Nepean, Bart. .. ..	1812
The Hon. Mountstuart Elphinstone ..	1819

Major-General Sir John Malcolm, G.C.B. 1827  
 Lieut.-General Sir Thomas Sidney Beak- 1830  
 with, K.C.B.

Died, 15th January, 1831.

John Romer ( <i>Officiating</i> ) .. ..	1831
The Earl of Clare .. ..	1831
Sir Robert Grant, G.C.H. .. ..	1835
Died, 9th July, 1838.	
James Farish ( <i>Officiating</i> ) .. ..	1838
Sir J. Rivett-Carnac, Bart. .. ..	1839
Sir William Hay Macnaghten, Bart. (b) ..	
George William Anderson ( <i>Officiating</i> ) ..	1841
Sir George Arthur, Bart., K.C.H. .. ..	1842
Lestock Robert Reid ( <i>Officiating</i> ) .. ..	1846
George Russell Clerk .. ..	1847
Viscount Falkland .. ..	1848
Lord Elphinstone, G.C.H., P.C. .. ..	1853
Sir George Russel Clerk, K.C.B. (2nd time)	1860
Sir Henry Bartle Edward Frere, K.C.B. .	1862
The Right Hon. William Robert Seymour	1867
Vesey FitzGerald.	
Sir Philip Edmond Wodehouse, K.C.B. ..	1872
Sir Richard Temple, Bart., K.C.S.I. ..	1877
Lionel Robert Ashburner, C.S.I. ( <i>Acting</i> ) ..	1880
The Right Hon. Sir James Fergusson, Bart., K.C.M.G.	1890
James Brathwaite Pelle, C.S.I. ( <i>Acting</i> ) ..	1885
Baron Reay .. ..	1885
Baron Harris .. ..	1890
Herbert Mills Birdwood, C.S.I. ( <i>Acting</i> ) ..	1895
Baron Sandhurst .. ..	1895
Baron Northcote, C.B. .. ..	1900
Sir James Monteath, K.C.S.I. ( <i>Acting</i> ) ..	1903
Baron Lamington, G.C.M.G., G.C.I.E. ..	1903
J. W. P. Muir-Mackenzie, C.S.I. ( <i>Acting</i> ) ..	1907
Sir George Sydenham Clarke, G.C.M.G., G.C.I.E. (c).	1907
Baron Willingdon, G.C.I.E. .. ..	1913
(a) Proceeded to Madras on duty in Aug., 1798, and then joined the Council of the Governor-General as Commander-in-Chief in India on the 28th Oct., 1798.	
(b) Was appointed Governor of Bombay by the Honourable the Court of Directors on the 4th Aug., 1841, but, before he could take charge of his appointment, he was assassinated in Cabul on the 23rd Dec., 1841.	
(c) Afterwards (by creation) Baron Sydenham.	

## The Madras Presidency.

The Madras Presidency, officially the Presidency of Fort St. George, together with the Native States, occupies the whole southern portion of the peninsula, and, excluding the Native States, has an area of 141,075 square miles. It has on the east, on the Bay of Bengal, a coast-line of about 1,200 miles; on the west, on the Indian Ocean, a coast-line of about 450 miles. In all this extent of coast, however, there is not a single natural harbour of any importance; the ports, with the exception of Madras, which has an artificial harbour, are merely open roadsteads. A plateau, varying in height above sea-level from about 1,000 to about 3,000 ft., and stretching northwards from the Nilgiri Hills, occupies the central area of the Presidency; on either side are the Eastern and the Western Ghats, which meet in the Nilgiris. The height of the western mountain-chain has an important effect on the rainfall. Where the chain is high, the intercepted rain-clouds give a heavy fall, which may amount to 150 inches, on the seaward side, but comparatively little rain falls on the landward side of the range. Where the chain is low, rain-clouds are not checked in their westward course. In the central tableland and on the east coast the rainfall is small and the heat in summer excessive. The rivers, which flow from west to east, in their earlier course drain rather than irrigate the country; but the deltas of the Godavari, Krishna and Cauvery are productive of fair crops even in time of drought and are the only portions of the east coast where agriculture is not dependent on a rainfall rarely exceeding 40 inches and apt to be untimely.

### Population.

The population of the Presidency in 1911 was 41,402,000 and that of the Native States was 4,813,000. Hindus account for 89 per cent, Mahomedans for 6, Christians for 3 and Animists for 2. The vast majority of the population is of Dravidian race, and the principal Dravidian languages, Tamil and Telugu, are spoken by 15 and 14 million persons, respectively. Of every 1,000 people, 407 speak Tamil, 377 speak Telugu, 74 Malayalam, 37 Canarese and 23 Hindustani. It is remarkable that of the 41 millions of population all but quarter of a million belong to it by birth.

### Agriculture.

About 68 per cent. of the population is occupied in Agriculture. About 49 per cent. having a direct interest as land-owners or tenants. About 86 per cent. of the cultivated acre is under food crops, the principal being rice (10·7 million acres), cholam or great millet (5·8 million acres), spiked millet (3·3 million acres) and ragi or millet (2·5 million acres). 21,023 acres are under wheat, 3,079 acres are under barley. About 3·2 million acres are under oil seeds, about 2·7 million acres are under cotton, 26,822 acres are under tea and 43,522 acres are under coffee. Irrigation is unnecessary on the West Coast but on the East about 80·5 per cent. of the cultivated area has ordinarily to be irrigated. Irrigation works include 28,896 tanks, 6,164 river channels, 6,114 spring channels, 1,391 canals, 391,659 syakats wells and 215,786 supplemental wells. The

recent progress of the application of machinery to irrigation on a small scale has been remarkable.

### Industries.

Comparative poverty in readily exploitable mineral wealth and the difficulty of coal supply prohibit very large industrial development in the Presidency, but excellent work, both in reviving decadent industries and testing new ones, has been done under Government auspices. The only indigenous art employing a considerable number of workers is weaving. There is no system of regular registration in vogue, and the figures given can be regarded only as approximate, but returns show a total of 1,231 factories driven by engines of an aggregate H. P. of 33,417. Of these factories 179 are concerned with cotton.

### Trade.

The grand total of sea-borne trade of the Madras Presidency in 1914-15 was Rs. 53,15,91,000, a decrease of some 16 per cent. owing to war conditions. It would be misleading to cite the years figures in detail since they were abnormal; the average for the 5 years ending 1910-11 was Rs. 45,01,10,000. The following items in the 1914-15 returns may be mentioned:—Exports decreased by 16 per cent in Indian produce and by 26 per cent. in foreign goods re-exported. Imports decreased by 23 per cent. under the heading merchandise. In the last normal year, about 63 per cent. of the trade of the Presidency was with the British Empire and about 42 per cent. with the United Kingdom. The port of Madras accounted for 41 per cent. of the whole sea-borne trade of the Presidency.

### Education.

The literate population numbers 3,130,000 in every 1,000, 138 men and 13 women can read and write. Of every 1,000 persons, 6 are literate in English, but the total number of women literate in English is only 4,000. There were in 1913-1914, twenty-nine Arts Colleges, five Oriental Colleges, three Professional Colleges, 364 Secondary Schools and 26,018 Elementary Schools for males; for females there were two Arts Colleges, 69 Secondary Schools and 1,443 Elementary Schools. In addition to these, all of which were public institutions; there were 368 advanced and 4,222 elementary private institutions for male scholars and 122 for females. The total number of scholars in educational institutions of all kinds was 1,469,945 including 7,094 students in Arts and Oriental Colleges, 986 in Professional Colleges, 128,157 in Secondary Schools and 1,200,249 in Elementary schools. The Madras University produces each year about 600 graduates in Arts.

### Government.

The Madras Presidency is governed on a system generally similar to that obtaining in Bombay and Bengal. At the head is the Governor usually selected from the ranks of British public men or of ex-Governors of Colonies; with the Governor is associated an Executive Council of three members, two of

whom must have served for ten years under the Crown in India, while the third, of whom official experience is not required, is in practice, but not of necessity, an Indian. Madras administration differs, however, in some important respects from that of other major Provinces. There is no intermediate local authority between the Collector of the District and the authorities at headquarters, the Commissioner being unknown in Madras. Part of the power which would be reserved elsewhere for the Commissioner is given to the Collector, whose status is rather higher in Madras than elsewhere, and part is exercised by the Board of Revenue. Each member of the Board of Revenue is in fact a Commissioner for specific subjects throughout the Presidency. This conduces to administration by specialists and to the maintenance of equal progress in specific matters in every part of the Presidency, but it leaves the Government without an official who can judge of the general administration of large parts of the country. For these and other reasons the Decentralisation Commission recommended that a system of Commissionerships be introduced in Madras.

### Finance.

According to the revised estimates for 1915-16 the Presidency's financial position was as follows in lakhs of rupees:—Opening balance, Rs. 110 '16; receipts, Rs. 763 '96; expenditure Rs. 771 '92; the deficit being Rs. 7 '06.

### Governor and President-in-Council.

His Excellency the Rt. Hon. Baron Pentland, G.C.I.E., P.C. Took his seat 36th October, 1912.

### Personal Staff.

Private Secy., T. E. Moir I.O.S.

Military Secy., Lieut.-Col. R. G. Munn.

Aides-de-Camp. Capt. J. B. Monins, Lt.-Col. H. H. Gordon Mitchell, Captain D. L. G. Carleton-Smith

Extra Aide-de-Camp, Captain L. M. Pect.

Indian Aides-de-Camp, Risaldar Major Malik Sh'r Bahadur, Hon. Capt. Shaik Ismail Sirdar Bahadur.

Surgeon, Major Frederick Fenn Elwes, C.I.E., I.M.S.

Commandant of Body Guard, Captain Wigram Seymour Elliot Monev.

Adjutant, Governor's Body Guard.—Captain G. F. Llewellyn.

### Members of Council.

Sir P. S. Aiyar Sivaswami Aiyar, C.S.I., C.I.E.

Sir H. A. Stewart, K.C.V.O., C.S.I.

Mr. A. G. Cardew, C.S.I., I.C.S.

Additional Members of Council Elected.

Thiruvengada Ranga Achariyar.

Rev. G. Pittendrigh.

A. Suryanarayana Rao Pantulu.

M. Ramchandra Rao Pantulu.

A. Subba Krishna Rao Pantulu.

Pulamati Siva Rao.

A. Subbarayulu Reddiyar.

B. V. Aiyar Narasimha Aiyar.

K. Sadasiva Bhut.

V. K. Aiyangar Ramannachariyar

Krishnaswami Rama Aiyangar.

K. R. Venkata Krishna Rao Pantulu.

B. Raja Rajeswara Setupathi, Raja of Ramnad.

Bhupatiraju Venkatapati Raju.

K. Chidambaranatha Mudaliyar.

K. K. Raman Kavalappara Muppil Nayar.

Yaqub Hasan, Sahab Bahadur.

Ahmed Tambi Ghulam Muhiuddin Marakkayar.

J. O. Robinson.

Gordon Fraser.

E. F. Barber.

### Nominated.

N. S. Brodie.

L. Davidson, C.S.I.

L. E. Buckley

J. H. Stone

R. B. Clegg.

S. B. Murray.

Colonel William Montague Ellis, R.F.

Diwan Bahadur P. Rajagopala Achariyar.

Surgeon-Gen. W. R. Bannerman, C.S.I., M.D., I.M.S.

James Perch Bedford.

H. F. W. Gillman.

S. Srinivasa Ayyangar

Sir Ghulam Muhammad Ali

The Most Rev. John Aclen.

T. Richmond.

Sir F. J. E. Spring, K.C.I.L.

Rao Bahadur S. C. Ramanathan Chettiyar

Muthayya Chetti Annamalai Chettiyar.

Rao Bahadur K. R. Suryanarayanamurti Nayudu Garu.

Sri Sobha Chandra Singh Deo.

Charles George Todhunter.

### SECRETARIES TO GOVERNMENT.

Chief Secretary to Government, A. Butterworth, I.C.S. (on leave).

Revenue, L. Davidson, C.S.I., I.C.S.

Local and Municipal, Education and Legislative, James Perch Bedford.

Public Works (General), Col. W. M. Ellis, R.E.

Joint Secretary, S. B. Murray.

### BOARD OF REVENUE.

First Member, R. B. Clegg.

Second Member, N. S. Brodie, M.A.

Third Member, L. E. Buckley.

Fourth Member, H. F. W. Gillman.

### MISCELLANEOUS APPOINTMENTS.

Commissioner of Revenue Settlement, &c., L. E. Buckley, I.C.S.

Revenue Survey Department, Director, D. G. Hatchell.

Director of Public Instruction, J. H. Stone, C.I.E. (Ag.)

Vice-Chancellor of Madras University, Justice Sir John Wallis.

Registrar of Madras University, F. Dewsbury.



<i>Inspector-General of Police</i> , P. L. Moore, C.I.E., I.C.S.	<i>Major-General William Medows</i> .. .. 1790
<i>Surgeon-General</i> , Surgeon-General W. B. Bannerman, C.S.I.	<i>Sir Charles Oakeley, Bart.</i> .. .. 1792
<i>Accountant-General</i> , A. Newmarch.	<i>Lord Hobart</i> .. .. 1794
<i>Inspector-General of Prisons</i> , Col. R. J. Macnamara, I.M.S.	<i>Major-General George Harris (Acting)</i> .. 1798
<i>Postmaster-General</i> , John Monteath.	<i>Lord Clive</i> .. .. 1799
<i>Officiating Collector of Customs</i> , G. N. Bower, B.A.	<i>Lord William Cavendish Bentinck</i> .. 1803
<i>Commissioner of Salt, Abkari, etc.</i> , N. S. Brodie.	<i>William Petrie (Acting)</i> .. .. 1807
<i>Inspector-General of Registration</i> , C. R. M. Schmidt.	<i>Sir George Hilaro Barlow, Bart., K.B.</i> .. 1807
<i>President, Madras Corporation</i> , P. L. Moore, C.I.E.	<i>Lieut.-General the Hon. John Abercromby.</i> .. 1813
<i>Director of the Kodaikanal and Madras Observatories</i> , J. Evershed.	<i>The Right Hon. Hugh Elliot</i> .. .. 1814
<i>Supdt., Gort. Central Museum, and Principal Librarian, Connemara Public Library</i> , J. R. Henderson.	<i>Major-General Sir Thomas Munro, Bart., K.C.B.</i> .. 1820
<i>Piscicultural Expert</i> , H. C. Wilson.	<i>Died, 6 July, 1827.</i>
<i>Persian and Hindustani Translator to Government</i> , Major A. R. Nethersole, I.A.	<i>Henry Sullivan Greeme (Acting)</i> .. .. 1827
<i>Registrar of Co-operative Credit Societies</i> , L. D. Swamikannu Pillai, Diwan Bahadur	<i>Stephen Rumbold Lushington</i> .. .. 1827
<i>Scientific Officer for Planting Industries of S. India</i> , R. D. Anstond.	<i>Lieut.-General Sir Frederick Adam, K.C.B.</i> .. 1832
<i>Consulting Architect</i> , W. H. Nicholas.	<i>George Edward Russell (Acting)</i> .. .. 1837
	<i>Lord Elphinstone, G.C.H., P.C.</i> .. .. 1837
	<i>Lieut.-General the Marquess of Tweeddale, K.T., C.B.</i> .. 1842
	<i>Henry Dickinson (Acting)</i> .. .. 1848
	<i>Major-General the Right Hon. Sir Henry Pottinger, Bart., G.C.B.</i> .. 1848
	<i>Daniel Elliott (Acting)</i> .. .. 1854
	<i>Lord Harris</i> .. .. 1854
	<i>Sir Charles Edward Trevelyan, K.C.B.</i> .. 1859
	<i>William Ambrose Morehead (Acting)</i> .. 1860
	<i>Sir Henry George Ward, G.C.M.G.</i> .. 1860
	<i>Died at Madras, 2 August, 1860.</i>
	<i>William Ambrose Morehead (Acting)</i> .. 1860
	<i>Sir William Thomas Denison, K.C.B.</i> .. 1861
	<i>Acting Viceroy, 1863 to 1864.</i>
	<i>Edward Maltby (Acting)</i> .. .. 1863
	<i>Lord Napier of Merchistoun, K.T. (a)</i> .. 1866
	<i>Acting Viceroy.</i>
	<i>Alexander John Arbuthnot, C.S.I. (Acting)</i> .. 1872
	<i>Lord Hobart</i> .. .. 1872
	<i>Died at Madras, 27 April, 1875.</i>
	<i>William Rose Robinson, C.S.I. (Acting)</i> .. 1875
	<i>The Duke of Buckingham and Chandos</i> .. 1875
	<i>The Right Hon. W. P. Adam</i> .. .. 1880
	<i>Died at Ootacamund, 24 May, 1881.</i>
	<i>William Hudleston (Acting)</i> .. .. 1881
	<i>The Right Hon. M. E. Grant Duff</i> .. .. 1881
	<i>The Right Hon. Robert Bourke, P.C.</i> .. 1886
	<i>Lord Connemara, 12 May, 1887 (by creation).</i>
	<i>John Henry Garstin, C.S.I. (Acting)</i> .. .. 1890
	<i>Baron Wenlock</i> .. .. 1891
	<i>Sir Arthur Elbank Havelock, G.C.M.G.</i> .. 1896
	<i>Daron Amptill</i> .. .. 1900
	<i>Acting Viceroy and Governor-General, 1904.</i>
	<i>James Thomson, C.S.I. (Acting)</i> .. .. 1904
	<i>Gabriel Stokes, C.S.I. (Acting)</i> .. .. 1906
	<i>Hon. Sir Arthur Lawley, K.C.M.G., G.C.I.E.</i> .. 1906
	<i>Sir Thomas David Gibson-Carmichael, Bart., K.C.M.G., G.C.I.E. (b)</i> .. 1911
	<i>Became Governor of Bengal, 1 April, 1912.</i>
	<i>Sir Murray Hammick, K.C.S.I., C.I.E. (Acting).</i> .. 1912
	<i>Right Hon. Baron Pentland, P.C., G.C.I.E. (a) Afterwards (by creation) Baron Napier of Ettrick.</i> .. 1912
	<i>(b) Afterwards (by creation) Baron Carmichael of Skirling.</i>

### Presidents and Governors of Fort St. George in Madras.

<i>William Gyfford</i> .. .. .	1684
<i>Elihu Yale</i> .. .. .	1687
<i>Nathaniel Higginson</i> .. .. .	1692
<i>Thomas Pitt</i> .. .. .	1698
<i>Gulston Addison</i> .. .. .	1709
Died at Madras, 17 Oct., 1709.	
<i>Edmund Montague (Acting)</i> .. .. .	1709
<i>William Fraser (Acting)</i> .. .. .	1709
<i>Edward Harrison</i> .. .. .	1710
<i>Joseph Collet</i> .. .. .	1711
<i>Francois Hastings (Acting)</i> .. .. .	1727
<i>Nathaniel Elwick</i> .. .. .	1727
<i>James Macrae</i> .. .. .	1725
<i>George Morton Pitt</i> .. .. .	1730
<i>Richard Benyon</i> .. .. .	1735
<i>Nicholas Morse</i> .. .. .	1744
<i>John Hinde</i> .. .. .	1747
<i>Charles Floyer</i> .. .. .	1750
<i>Thomas Saunders</i> .. .. .	1755
<i>George Pigot</i> .. .. .	1755
<i>Robert Palk</i> .. .. .	1763
<i>Charles Bouchier</i> .. .. .	1767
<i>Joias DuFre</i> .. .. .	1770
<i>Alexander Wynch</i> .. .. .	1773
<i>Lord Pigot (Suspended)</i> .. .. .	1775
<i>George Stratton</i> .. .. .	1776
<i>John Whitehill (Acting)</i> .. .. .	1777
<i>Sir Thomas Rumbold, Bart.</i> .. .. .	1778
<i>John Whitehill (Acting)</i> .. .. .	1780
<i>Charles Smith (Acting)</i> .. .. .	1780
<i>Lord Macartney, K.B.</i> .. .. .	1781

### Governors of Madras.

Lord Macartney, K.B.	..	..	1785
Alexander Davidson ( <i>Acting</i> )	..	..	1785
Major-General Sir Archibald Campbell, K.B.	..	..	1786
John Holland ( <i>Acting</i> )	..	..	1789
Edward J. Holland ( <i>Acting</i> )	..	..	1790

## The Bengal Presidency.

The Presidency of Bengal, as constituted on the 1st April 1912, comprises the Burdwan and Presidency divisions and the district of Darjeeling, which were formerly administered by the Lieutenant-Governor of Bengal; and the Rajshahi, Dacca and Chittagong divisions which by the partition of the old Province had been placed under the administration of the Lieutenant-Governor of Eastern Bengal and Assam. The area of the Presidency is 84,092 square miles, and it possesses a population of 46,305,642 persons; included within this area are the two Native States of Cooch Behar and Hill Tippera, which are under the general supervision of the Government of Bengal. The area of the British territory is 78,699 square miles. Bengal comprises the lower valleys and deltas of the Ganges and Brahmaputra, and in the main consists of a great alluvial plain intersected in its southern portion by innumerable waterways. In the north are the Himalayan mountain and submontane tracts of Darjeeling and Jalpaiguri, and on the south-east the hills in Hill Tippera and Chittagong, while on the west the Chota Nagpur plateau is continued by an undulating tract running through the western portions of Midnapur, Bankura, Burdwan and Birbhum. The general range of the country however is very low, and a great fertile plain extends southward from Jalpaiguri to the forests and swamps known as the Sunderbans, which lie between the area of cultivation and the Bay of Bengal.

### The People.

Of the inhabitants of the Presidency 24,237,238 or 52·4 per cent. are Mahomedans and 20,945,379 Hindus. These two major religions embrace all, but 2·4 per cent. of the population. Christians, Buddhists, and Animists combined number a little over 1,100,000.

Bengali is spoken by ninety-two per cent. of the population of the Presidency and Hindi and Urdu by four per cent. The Oriya-speaking people number nearly 300,000 and Naipali is the tongue of 80,000 persons principally residents in the Darjeeling and Jalpaiguri districts. The great majority of the speakers of the Munda languages are Santals in West and North Bengal.

### Industries.

According to the returns of the Census of 1911 nearly 35½ million persons or three-fourths of the population derive their support from pasture and agriculture, and of these nearly 30 millions are cultivators, and nearly 3½ millions farm servants and field labourers. The area under jute in 1916 is estimated at 2,351,821 acres against 2,086,270 in 1915. The heavy rain which fell in Northern Bengal caused considerable damage to the crops on low lands. Some slight damage was also caused in Eastern districts, owing to the sudden rise of the rivers. Bengal is the most important rice-producing area in Northern India, and it is computed that 85 per cent. of the cultivated area of the Presidency is devoted to its production. Other crops include barley, wheat, pulses, and oil-seeds, the area devoted to the last named being 1,794,400 acres. Sugar is produced both from the sugar cane and from the date-palm, and tobacco is grown for local consumption in nearly every district of Bengal. The area under tea in 1915-16 was 161,300 acres. There were 297

plantations employing a daily average of 100,598 permanent and 29,840 temporary hands.

### Manufactures and Trade.

The jute mills in and around Calcutta constitute the principal manufacturing industry of the Presidency. The year ended 31st March, 1916, was for the Jute industry an *annus mirabilis*. During the year, 67 working mills employed daily on an average 251,957 persons. Throughout the year the industry was in a particularly healthy condition, owing largely to demands connected with the war. In July and the early part of August, the war demands were so considerable that the trade entered on a unique period of prosperity. The natural consequence was that the values of gunnies rose quickly. The mills were also carrying large stocks of cheap jute, secured during the slump in raw jute after the outbreak of war, when the continental market disappeared. The disappearance of the continental demand and the absence of freight gave the Calcutta mills a complete hold on the market in raw jute for a long period. Another factor which favoured the mills was the good supply of labour. The stoppage of railway and other large projects owing to the war released a large mass of labour which drifted to the mills. The local mills thus made profits undreamt of in the years of peaceful progress. The average value of the shares in Jute Mill Companies in 1915-16 for each hundred rupee share was Rs. 321. Owing to restrictions imposed, raw jute went away in smaller quantities than in previous years, but compared with 1914-15 the tonnage was larger by 23 per cent. and the value by 26 per cent. The Calcutta Improvement Trust benefited to the extent of Rs. 10·13 lakhs in the year 1915-16, while in 1914-15 the cess amounted to Rs. 8·42 lakhs. The exports of raw and manufactured jute represented 60 per cent. of Calcutta's exports. Other principal industries are cotton twist and yarn, silk yarn and cloth, hand-made cloth, sugar, molasses, and paper. Thirteen cotton mills were at work during 1915-16, employing daily on an average 11,641 persons. The silk weaving industry is in a declining state. There was only one silk mill working during 1915, which employed 50 hands. The manufacture of tea is carried on an extensive scale in Darjeeling and Jalpaiguri. In 1915, the number of coal mines worked was 176. The total output was 4,975,460 tons against 4,424,540 tons raised in 1914. The daily average of persons employed in the coal mines was 42,093, and there was a notable advance in the use of electricity. Three paper mills produced papers valued at Rs. 71 lakhs in 1915.

In 1915-16, the maritime trade of Bengal reached a total of Rs. 172·24 crores. The foreign trade amounted to Rs. 150·36 crores, of which Rs. 57·91 crores represented imports and Rs. 92·41 crores exports. Calcutta absorbed 97 per cent. of the foreign trade; the balance belongs to Chittagong.

### Administration.

The present form of Government dates from the 1st of April 1912, when the administrative changes announced by the King-Emperor at Delhi in December 1911 came into operation.

A Governor was then substituted for a Lieutenant-Governor, who had previously been at the head of the Province, and Lord Carmichael of Skirling assumed charge of the office. The Governor is assisted by an Executive Council, two of whom are at present members of the Indian Civil Service and the third an Indian. The Civil secretariat consists of the Chief Secretary, who is in charge of the Political Appointment and Judicial Departments, the Revenue Secretary, the Financial Secretary, who also deals with Commercial questions, the General Secretary who deals with questions of Local Self Government and Education and the Legislative Secretary, five Under-Secretaries and one Assistant Secretary. The Government divides its time between Calcutta, Darjeeling and Dacca.

Bengal is administered by five Commissioners under the Governor in Council, the divisions being those of the Presidency, Burdwan, Rajshahi, Dacca and Chittagong. The unit of administration is the District Magistrate and Collector. As Collector he supervises the gathering of the revenue and is the head of all the Departments connected with it, while as District Magistrate he is responsible for the administration of Criminal Justice in the district. The immediate superior of the District Magistrate is the Divisional Commissioner. Commissioners are the channels of communication between the local officers and the Government. In certain revenue matters they are, in their turn, subject to the Board of Revenue in Calcutta; in other matters they are under the direct control of Government.

#### Justice.

The administration of justice is entrusted to the High Court of Calcutta which consists of the Chief Justice who is a barrister and 14 puisne judges who are barristers, civilians or vakils. Below the High Court are the District and Additional Judges, the Small Cause Court and Subordinate Judges and the Munsifs. Of these officers the District and Additional Judges and a certain number of subordinate judges are also endowed with the power of a Criminal Court while the remainder have jurisdiction in Civil matters only. Criminal justice is administered by the High Court, the Courts of Session and the courts of the various classes of magistrates. On its appellate side the High Court disposes of appeals from the order of a Court of Session, and it also confirms, modifies or annuls sentences of death passed by Sessions Courts. Calcutta has four Presidency Magistrates, two Municipal Magistrates and also a number of Honorary Magistrates and it possesses a Court of Small Causes with six judges who dispose of cases of the class that are usually heard in County Courts in England.

#### Local Government.

By the Bengal Act of 1884 which regulates municipal bodies in the interior and its subsequent amendments the powers of Commissioners of municipalities have been increased, and the elective franchise has been extended. Municipal expenditure now comprises a large number of objects, including veterinary institutions and the training and employment of Health Officers and Sanitary Inspectors and female medical practitioners. The Commissioners also have large powers in regard to the water-supply and the regulation of buildings. In

Calcutta Act (III) of 1899 created three co-ordinate municipal authorities, the Corporation, the General Committee, and the Chairman. The total number of Commissioners is fifty, of whom 25 are elected, and the remainder appointed by Government and by commercial bodies. In order to improve the insanitary and congested areas of the city, the Calcutta Improvement Trust has been created with extensive powers. In the mofussil, District and Local Boards exercise considerable powers, with regard to Public Works, Education and Medical relief and Union Committees have been formed which deal for the most part with the control of village roads, sanitation and water-supply.

#### Finance.

As in other Provinces, the revenue is divided between the Local Government and the Government of India. The Budget for 1916-17 showed an opening balance of Rs. 2.59 crores, estimated revenue amounted to Rs. 6.20 crores and expenditure aggregated Rs. 6.18 crores. Of the closing balance of Rs. 261 lakhs, Rs. 242 lakhs was earmarked for various objects.

#### Public Works.

The Public Works Department is at present under the charge of a Chief Engineer and the Irrigation Department under that of a temporary Chief Engineer whose appointment has been sanctioned for five years. The redistribution of territories on 1st April 1912 caused considerable changes in this Department and almost all the irrigation works in the old province of Bengal as well as two out of the three Canal Revenue Divisions went to the new province of Bihar and Orissa. There was also a considerable reduction in the staff and in the number of P. W. Circles and Divisions. Public buildings are erected by the Department which constructs roads and carries out miscellaneous public improvements. Irrigation Works in Bengal are under the charge of the Irrigation Department which deals with the numerous embankments and drainage works as well as waterways that intersect the province.

The Marine Department which deals with all questions connected with the Bengal Pilot Service, Merchant Shipping and with the importation, possession, &c., of petroleum is also under the charge of the Irrigation Secretary.

#### Police.

The Bengal Police force comprises the Military Police, the District Police the Railway Police, and the River Police. The District Police are under the control of the Inspector-General of Police, who is usually a Covenanted Civilian, although the office is open to gazetted members of the Force. Under him are Deputy Inspectors-General, for the Dacca Range, the Rajshahi range, the Presidency range, and the new Burdwan range, and also two Deputy Inspectors-General, one in charge of the C. I. D., the Railway and River Police, and the other in charge of the Intelligence Branch of the C. I. D. Each district is in charge of a Superintendent, and several or the more important districts have an Additional Superintendent. The cadre comprises Assistant Superintendents, Deputy Superintendents, Inspectors, Sub-Inspectors, Sergeants, head constables and constables. There is also a Village Police, composed of daffadars and chowkidars, who receive a monthly salary which is collected from the villages by the Panchayat. The Calcutta City police is a separate force

maintained by Government under a Commissioner who is responsible direct to Government. The Commissioner has under him Deputy Commissioners, Assistant Commissioners, Inspectors, Sub-Inspectors, head constables and constables, and a reserve force of about 120 European sergeants. A school for the training of recruits for the Calcutta Police force has recently been established at Calcutta. There is a training college and school at Sarda, in the district of Rajshahi where newly appointed gazetted officers, Sub-Inspectors and constables learn their duties. There are three other schools at Dacca, Berhampore and Rampur Bealia for the training of constables. The annual cost of the Police is nearly Rs. 110 lakhs.

#### Medical.

The head of the Medical Department is the Surgeon General with the Government of Bengal, and Sanitation is in charge of the Sanitary Commissioner, both these officials being members of the Indian Medical Service. There is also a Sanitary Engineer for the Presidency. In the districts the Civil Surgeons are responsible for medical work. There are 19 hospitals in Calcutta, 9 of which are supported by the Government and 39,617 persons are treated at these institutions annually, of whom nearly 31,223 are in-patients. In the mofussil districts there are several hundred hospitals and dispensaries; the number of patients treated annually in the Province were 9,043,638 including 62,97 in-patients.

#### Education.

In the Presidency of Bengal education is imparted partly through Government agency and partly through private bodies, assisted in large measure by Government grants-in-aid. Government maintains three Arts Colleges in Calcutta (of which one is a college for women and one the Sanskrit College), one at Hughli, one at Krishnagar, one at Dacca, one at Rajshahi and one at Chittagong. It also maintains two training colleges, one at Calcutta and one at Dacca, for teachers who teach in secondary schools through the medium of English and 5 normal schools, one in each division, for the training of teachers in secondary schools through the medium of the vernacular; also an engineering college at Sibpur and an engineering school at Dacca, a medical college, a veterinary college, a school of art and a commercial school in Calcutta and a weaving school at Serampore. It also provides at the headquarters of all districts, except Burdwan and Midnapore, and also at certain other mofussil centres, High English schools for the education of boys, while to some Government Arts Colleges high schools are attached. In Calcutta there are three high schools for boys, two of which are attached to Presidency College and one to the Sanskrit College. Government high schools for girls exist only in the headquarters stations of Calcutta, Dacca, Mymensingh and Chittagong. The other secondary schools, with the exception of a few middle schools managed either by Government or by boards, are under private control. The administration of primary education in all areas, which are not under municipalities, rests with the district boards, large grants being given from provincial revenues to the boards, which contribute only slightly from their own funds. Only in back-

ward localities are such schools either entirely managed, or directly aided, by Government. Apart from the institutions referred to above, 113 institutions called Guru Training Schools are maintained by the Department for the training of vernacular teachers. For the education of Mahomedans, there are senior madrasas at Calcutta, Dacca, Chittagong and Hughli, which are managed by Government. There are also certain Government institutions for technical and industrial education. A large proportion of educational work of every stage is under the control of various missionary bodies, which are assisted by Government grants-in-aid.

The municipalities are required to expend a certain proportion of their ordinary income on education. They are mainly responsible for primary education within their jurisdiction, but schools in these areas are eligible also for grants from Government. These bodies maintain a second grade Arts College and a high school at Midnapore, a high school at Burdwan, a high school at Santipur and a high school at Chittagong.

There are now in the Presidency:—

Arts Colleges .. ..	32
Law .. ..	10
Medical College .. ..	1
Engineering College .. ..	1
Training Colleges .. ..	4
Secondary Schools .. ..	2,588
Primary Schools .. ..	40,410
Special .. ..	1,317
Private Institutions .. ..	407

with 18,44,541 pupils in all.

The Government Educational Budget allotted for the province for 1914-1915 is Rs. 1,45,43,000. Of this a large proportion represents the grants recently allotted by the Government of India.

The Department is administered by a Director of Public Instruction, assisted by an Assistant Director and an Assistant Director for Muhammadan Education and a special officer in connection with Technical and Industrial Education. Each division is in charge of a Divisional Inspector assisted by a certain number of Additional and Assistant Inspectors according to the requirements of the several divisions. Similarly the administrative charge of the primary education of each district is in the hands of a Deputy Inspector assisted by Additional Deputy and Sub-Inspectors of Schools, the latter class officers being in some instances helped by officers of humbler status called Assistant Sub-Inspectors and Inspecting Pandits. Higher education is controlled by the University (Calcutta) established in 1857, administered by the Chancellor (the Governor-General and Viceroy of India), the Rector (the Governor of Bengal), the Vice-Chancellor (appointed by the Government of India, usually for two years at a time), and 110 fellows, of whom 10 are ex-officio, 10 are elected by registered Graduates, 10 by the Faculties and the remainder 80 are nominated by the Chancellor. The University maintains a Law College, called the University Law College, Calcutta. The University is mainly an examining body, but it has now made itself responsible for the actual teaching of students, for which purpose it employs an agency which is quite distinct

from the staffs of the affiliated colleges.

The following University Professorships have been founded.—(1) Prasanna Kumar Tagore Law Professorship, (2) Munro Professorship of Economics, (3) George V. Professorship of Mental and Moral Science, (4) Hardinge Professorship of Higher Mathematics, (5) Carmichael Professorship of Ancient Indian History and Culture, (6) Pelt Professorships of Chemistry and Physics, (7) Sir Rash Behari Ghose Professorship of Applied Mathematics, Physics, Chemistry and Botany, and (8) Two Professorships of English.

The principal educational institutions are:—  
GOVERNMENT ARTS COLLEGES.

Presidency College, Calcutta, Principal, W. C. Wordsworth.

Dacca College, Principal, W. A. J. Archbold.

Rajshahi College, Principal, Rai K. Banerji Bahadur.

Chittagong College, Principal, J. R. Barrow.

Sanskrit College, Principal, Dr. S. C. Acharya.

Hugli College, Principal, J. Bottomley.

Krishnagar College, Principal, R. N. Glichrst.

Bethune College, Calcutta, Lady Principal

Miss A. L. Janan.

#### PRIVATE ARTS COLLEGES.

*Aided.*

Scottish Churches College, Calcutta, Principal, Rev. J. Watt.

St. Xavier's College, Calcutta, Rector, Rev. Father Oshan.

Jaganath College, Dacca, Principal, Rai L. M. Chatterji Bahadur.

Brajmookan College, Barisal, Principal, N. L. Mohkerjee.

Ananda moan College, Mymensingh, Principal, Dr. J. Ghosh.

Victoria College, Comilla, Principal, Satyendra-nath Basu.

Wesleyan College, Bankura, Principal, Rev. J. Mitchell.

Victoria College, Narail, Principal, Gopal-chandra Maitra.

Hindu Academy, Daulatpur, Principal, Kama-khyacharan Nag.

Serampore College, Principal, The Rev. Dr. George Howell.

St. Paul's Cathedral Mission College, Calcutta, Principal, The Rev. W. E. S. Holland.

Edward College, Pabna, Principal, R. Bose.

Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.S.B.

City College, Calcutta, Principal, Heramba Chandra Maitra.

Ripon College, Calcutta, Principal, Ramendra Sundar Trevedi.

Dangabasi College, Calcutta, Principal, G. C. Bose.

Metropolitan Institution, Calcutta, Principal, Saradaranjan Roy.

Central College, Calcutta, Principal, Khudiram Bose.

Krishna Chandra College, Hetampur, Principal, Dhurumdas Dutt.

Burdwan Raj College, Principal, Umacharan Bandopadhyaya.

Uttarpara College, Principal, Jogendra Nath Mitra.

Krishnath College, Berhampore, Principal, S. Banerji (offg.)

Loreto House, Calcutta, Lady Principal, The Rev. Mother Mary Borgia, I.B.V.M.

#### MUNICIPAL.

Midnapore College, Principal, Jogendra Nath Hazra.

#### COLLEGES FOR PROFESSIONAL TRAINING.

##### Engineering—Government.

Civil Engineering College, Sibpur, Principal, B. Heaton.

##### Teaching—Government.

David Hare Training College, Principal, W. E. Griffith, (on deputation). Babu Chista Haran Chakravarti (offg.)

Dacca Training College, Principal, E. E. Biss (on deputation). Mr. H. A. Starte (offg.)

##### Aided.

L. M. S. Training College, Bhowanipore (Calcutta), Rev. A. Sims.

Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.S.B.

##### Medicine—Government.

Medical College, Calcutta, Principal, Lt.-Col. J. T. Calvert.

##### Law.

University Law College, Calcutta, Principal, Dr. Sati Chandra Bagchi.

The Law Department, attached to the Dacca College, Vice-Principal, Waresha Chandra Sen Gupta.

The Law Department, attached to the Ripon College, Calcutta, Principal, Jankinath Bhattacharji.

There are also Readership classes attached to the Government Colleges at Dacca, Rajshahi, Hooghly, Chittagong and Krishnagar and in the unaided college at Berhampore, the Ripon College and the Metropolitan Institution, Calcutta, and the Municipal College at Midnapore.

#### Administration.

##### GOVERNOR AND PRESIDENT IN COUNCIL.

His Excellency The Rt. Hon. Thomas David, Baron Carmichael of Skirling, G.C.I.E., K.C.M.G. Took his seat, 1st April, 1912.

##### PERSONAL STAFF.

Private Secretary, W. R. Gourlay.

Military Secretary, Capt. Henry George Vaux.

Surgeon, Capt. W. L. Harnett, I.M.S.

Aides-de-Camp, Capt. W. P. Ocock, Middlesex Regiment; 2nd Lt. Duncan Balfour, Lothian and Border Horse.

Honorary Aides-de-Camp, Col. C. M. Pearce, V.D., Commander E. A. Constable, R.N.;

Lt.-Col. R. Glen, V.D.; Hony. Col. C. Routh; Lt.-Col. R. S. Hawkins, V.D., Commander Duncan Frederick Vines, R. I. M.;

Lt.-Col. D. A. Tyrie, V.D.

Extra Aide-de-Camp, Captain O. Featherstone, 4th Battalion, Queen's (Royal West Surrey Regiment).

Indian Aide-de-Camp, Risaldar Ismail, Khan Bahadur.

Commander of Body Guard, Captain O. F. Smith.

##### BENGAL EXECUTIVE COUNCIL.

N. D. Beatson Bell. Took his seat, November 1914.

P. C. Lyon, C.S.I. Took his seat, 1st April 1912.

Syed Shams-ul Huda. Took his seat, 1st April 1912.

##### LEGISLATIVE COUNCIL OF BENGAL.

##### Councillors, Ex-Officio.

N. D. Beatson Bell.

Mr. P. C. Lyon, C.S.I., I.C.S.

Navab Syed Shams-ul-Huda.

**Nominated, Officials.**

Mr. James Donald.  
 " F. J. Monahan.  
 Sir Satyendra Prasanna Singha, Kt.  
 Mr. John Lang.  
 " J. H. Kerr, C.I.E.  
 " C. H. Pompa.  
 " H. H. Green.  
 Surgeon-General W. R. Edwards, C.D., I.M.S.  
 Mr. J. B. H. Panton.  
 " W. W. Hornell.  
 Rai Priya Nath Mukharji Bahadur  
 Mr. C. F. Payne.

**Nominated, Non-officials.**

Nawab Sir Asif Qudr Saiyid Wasif Ali Mirza.  
 Khan Bahadur, K.C.V.O. of Murshidabad.  
 Sir Rajendra Nath Mukharji, K.C.I.E.  
 Mr. James Mackenzie.  
 Dr. Nilratan Sarkar.  
 Raja Hrishikesh Laha, C.I.E.  
 Lt.-Col. R. Glen.  
 Mr. G. C. Godfrey.  
 " Aminur Rahman.

**Elected.**

Mr. Provash Chandra Mitter.  
 Sir Bijay Chand Mahtab  
 Kumar Shilb Shekharwar Ray.  
 Babu Brajendra Kishor Ray Chaudhuri.  
 Babu Arun Chandra Singh.  
 Dr. Deba Prosad Sarbadhikari.  
 Rai Radhacharan Pal Bahadur.  
 Mr. Edward Hugh Bray.  
 " Archibald Birkmyre  
 " Rai Debendra Chandra Ghosh Bahadur.  
 " Ernest Bruce Eden  
 " E. A. Martin.  
 " H. R. A. Irwin.  
 Zahhadur Rahim Zahed Suhrawardy.  
 Maulvi Abdul Kasem.  
 Maulvi Abdul Kasem Fazl-ul-Haq.  
 Mr. Ashrafali Khan Chaudhuri.  
 " Abdul Rasul.  
 Babu Bhambendra Chandra Ray.  
 Rai Mahendra Chandra Mitra.  
 Mr. Altaf Ali.  
 Rai Sri Nath Ray.  
 Babu Akhil Chandra Datta.  
 Babu Surendra Nath Ray.  
 Babu Mohendra Nath Ray.  
 Babu Kshirod Bihari Dutta.  
 Babu Kishori Mohan Chaudhuri.  
 Ambika Charan Mazumdar.

**SECRETARIAT.**

Chief Secretary to Government, J. G. Cumming,  
 C.I.E.  
 Secretary, Revenue Department, J. H. Kerr, C.I.E.  
 Secretary, General Department, L. S. S. O'Malley.  
 Secretary, Financial Department, J. Donald.  
 Secretary, Judicial Department, E. P. Chapman.  
 Secretary to the Council and Secretary, Legislative  
 Department, A. W. Watson.  
 Secretary to Government, Public Works Depart-  
 ment, and Chief Engineer, H. H. Green.  
 Under Secretary to Government, Public Works  
 Department (Irrigation Branch), Anadi Nath  
 Mitra.

**BOARD OF REVENUE.**

Officiating Member, F. J. Monahan.  
 Secretary, W. A. Marr.

**MISCELLANEOUS APPOINTMENTS.**

Director of Public Instruction, W. W. Hornell.  
 Principal, School of Arts, P. Brown.  
 Inspector-General of Police, C. W. C. Plowden,  
 C.I.E.  
 Commissioner, Calcutta Police, Reginald Clarke  
 (Offg).  
 Conservator of Forests, C. E. Muriel.  
 Inspector-General of Civil Hospitals, Col. G. F.  
 Harris, C.I.E.  
 Sanitary Commissioner, Lieut.-Colonel W. W.  
 Clemesha.  
 Deputy Sanitary Commissioner for Malaria  
 Research, Major A. B. Fry.  
 Collector of Customs, Calcutta, C. W. E. Cotton,  
 B.A., I.C.S.  
 Commissioner of Excise and Salt, A. N. Moberly  
 Accountant-General, H. G. Tomkins, C.I.E.  
 Inspector-General of Prisons, Lt.-Col. W. J.  
 Buchanan, C.I.E.  
 Postmaster-General, P. G. Rogers, I.C.S.  
 Inspector-General of Registration, P. N.  
 Mukharji.

Director of Agriculture, J. R. Blackwood.  
 Protector of Emigrants, C. Banks, M.D.  
 Chairman of Calcutta Corporation, C. F. Payne.  
 Superintendent, Royal Botanic Gardens, Major  
 A. T. Gage.  
 Coroner, F. K. Dobbin.  
 Registrar of Co-operative Credit Societies, J. M.  
 Mitra.

**LIEUTENANT-GOVERNORS OF BENGAL.**

Frederick J. Halliday	..	..	..	1854
John P. Grant	..	..	..	1859
Cecil Beadon	..	..	..	1863
William Grey	..	..	..	1867
George Campbell	..	..	..	1871
Sir Richard Temple, Bart., K.C.S.I.	..	..	..	1874
The Hon. Ashley Eden, C.S.I.	..	..	..	1877
Sir Stuart C. Bayley, K.C.S.I. (Offg.)	..	..	..	1879
A. Rivers Thompson, C.S.I., C.I.E..	..	..	..	1882
H. A. Cockersall, C.S.I. (officiating)	..	..	..	1885
Sir Stuart C. Bayley, K.C.S.I., C.I.E.	..	..	..	1887
Sir Charles Alfred Elliott, K.C.S.I.	..	..	..	1890
Sir A. P. MacDonnell, K.C.S.I. (Offg.)	..	..	..	1898
Sir Alexander Mackenzie, K.C.S.I.	..	..	..	1895
Retired 6th April 1898.				
Charles Cecil Stevens, C.S.I. (Officiating)	..	..	..	1897
Sir John Woodburn, K.C.S.I.	..	..	..	1898
Died, 21st Nov. 1902.				
J. A. Bourdillon, C.S.I. (Officiating)	..	..	..	1903
Sir A. H. Leith Fraser, K.C.S.I.	..	..	..	1903
Lancelot Hare, C.S.I., C.I.E. (Offg.)	..	..	..	1906
F. A. Slack (Officiating)	..	..	..	1906
Sir E. N. Baker, K.C.S.I.	..	..	..	1906
Retired 21st Sept. 1911.				
F. W. Duke, C.S.I. (Officiating)	..	..	..	1911

The office of Lieutenant-Governor of Bengal  
 was abolished on April 1st 1912, when Bengal  
 was raised to a Governorship.

**GOVERNORS OF THE PRESIDENCY OF FOOT**

**WILLIAM IN BENGAL**

The Rt. Hon. Baron Carmichael of 1912  
 Skirling, G.C.I.E., K.C.M.G.

## The United Provinces.

The United Provinces of Agra and Oudh lie in practically the centre of Upper India. They are bounded on the north by Tibet, on the north-east by Nepal, on the south and south-east by Bengal, on the south by two of the Chota Nagpur States of the Central India Agency and the Saugor District of the Central Provinces, and on the west by the States of Gwalior, Dholpur, Bharatpur, Sirmor, and Jubbah, and by the Punjab. Their total area amounts to 107,297 square miles, to which may be added the area of the two Native States of Tehri and Rampur, both of which lie within the United Provinces, 5,079 square miles and the newly-created independent State of Benares with an area of 865 miles, giving a total of 112,346 square miles. The total population is 48,014,080, out of which Tehri and Rampur account for 832,036.

The Provinces, originally termed the North-Western Provinces and so amalgamated in 1877, receiving their present designation in 1902, include four distinct tracts of country: portions of the Himalayas, the sub-Himalayan tracts (the Kumaon), the great Gangetic plain and portions of the hill systems of Central India (Bundelkhand). The first two of these tracts are infertile and support a very sparse population and the Central Indian plateau is almost equally infertile, though better populated. The soil of the Gangetic plain, however, possesses an extreme fertility and here the density of population rises from 512 persons per square mile in the west, to 549 in the centre and 718 in the east, which gives the Provinces as a whole a greater population pressure on the soil than any other Provinces in India. In the south there are low rocky hills, broken spurs of the Vindhyan mountains, covered with stunted trees and jungle, and in the North the lower slopes of the Himalayas, clothed with dense forest, affording excellent big and small game shooting, and rising beyond in a tangled mass of ridges, ever higher and higher, until is reached the line of the eternal snows, but the greater part of the provinces consists of level plain, teeming with highly-cultivated fields and watered by four rivers—the Ganges, Jumna, Gogra and the Gumti.

### The People.

The population is mainly Hindu, 85 per cent. ranking as such whilst Mahomedans number 14 per cent., the total of all other religions being less than 0·6 per cent. composed of Christians (Europeans and Indians), Jains, Aryas and Sikhs; the Aryas are the followers of the Arya Samaj sect, which obtains widely in the Punjab and has extended its influence to the United Provinces. The three main physical types are Dravidian, Aryan and Mongoloid, the latter being confined to the Himalayan and sub-Himalayan districts and the former to South Mirzapur and Bundelkhand, whilst the high-caste Aryans frequent the western Districts of the Province. Most of the people, however, show a mixed Arya-Dravidian origin. Three languages are spoken by the great majority of the people in the plains—Western Hindi, Eastern Hindi and Behari; Urdu, or Hindustani, is a

dialect of Western Hindi, though it contains a large admixture of Persian and Arabic words, which makes it a *lingua franca*.

### Industries.

The principal industry is agriculture, which supports no less than 71·7 of the population. The soils of the Provinces fall into three groups; the valley soils of the Himalayas, the main alluvium and the Central Indian alluvium; the chief characteristic soil of the Central Indian alluvium is the black soil, with a lighter variant, though here also there are light loams and gravel. The Himalayan soils are of local origin and vary with the nature of the rock from which they have been formed, whilst the main alluvium soils are sand, clay and loam, the loam being, naturally, the most productive. The soil generally yields excellent crops of rice, millet, maize, linseed, cotton, wheat, sugarcane, pulses, barley and poppy, rice being grown mostly in low-lying, heavy clays. The greater part of the Provinces is highly cultivated, the rainfall varies from 50 to 60 inches in the Hills, to 40 inches in the Benares and Gorakhpur Divisions, whilst the Agra Division receives about 25 to 30 inches annually only. Drought seriously affected Bundelkhand and the Agra Division, in the past, but improved drainage, and irrigation (a protective system of irrigation works exists and is being extended) have enabled a complete recovery to be made and the agricultural prosperity of the Provinces is now high, though it varies with the rainfall. The great scourge has been, and is, that of plague, which hampers the agriculturist severely, and in the Terai, malaria still exacts a large toll. Land is held mostly on the ryotwari tenure in Bundelkhand and Kumaon, on zimindari tenure in Agra and taluqdari tenure in Oudh. The principal land owners in Oudh are the Taluqdars, some of whom own very large estates. The area held in taluqdari tenure amounts to 51 per cent. of the total area in Oudh.

### Manufactures.

The Provinces are not rich in minerals. Coal exists in Southern Mirzapur, iron and copper are found in the Himalayan Districts, and there were mines of importance there formerly, but increased difficulty of working them as veins became exhausted resulted in the closure of most of them. Gold is found in minute quantities by wash in some of the rivers in the Hills. Limestone is found in the Himalayas and stone is largely quarried in the Mirzapur District. Cotton is ginned and spun throughout the provinces, as a home industry, and weaving, by means of hand-looms, is carried on in most districts. In 1901 nearly a million persons were dependent on weaving, 140,000 on spinning and 136,000 on cleaning, pressing, and ginning, but during the last decade these industries have been on the decrease. The largest industry is in Azamgarh district, where there are 130,000 looms. Silk spinning is confined almost entirely to the district of Benares, where the famous *Kinkob* brocade is made. Em-

broidery is manufactured in Lucknow, where the noted *chikan* work of silk on cotton or mualin is produced, and in Benares, where gold and silver work on velvet silk, crepe and sarsenet obtains. The glass industry is important in some districts, Benares and Moradabad are noted for their lacquered brass work, porcelain is manufactured at Ghazipur, and other industries are those of paper-making (Lucknow) dyeing, leather-work and fireworks. The chief centre of European and Indian industry is Cawnpore, which, situated in most advantageous position on the Ganges, possesses tanneries, cotton, woollen, jute and other mills, which have a large and ever increasing output (the woollen mill is the largest in India). There are cotton factories at Aligarh (famous for its locks), Meerut and Bareilly; Mirzapur (which produces also excellent carpets), Hardoi and Hathras have cotton mills. Excellent furniture is made at Bareilly, at Allahabad there are stone works, at Rosa there is a very large English distillery, with patent still, and the provinces can claim six breweries, with an out-turn of over a million gallons.

The largest trade centres are Cawnpore, Allahabad, Mirzapur, Benares, Lucknow, Meerut, Aligarh, Hathras, Muttra, Agra, Farukhabad, Moradabad, Chandauli, Bareilly, Saharanpur, Muzaffarnagar, Ghaziabad, Kherja, Gorakhpur, Ghazipur, Pilibhit and Shahjahanpur.

#### Administration.

The Provinces are administered by a Lieutenant-Governor, who is generally chosen from among the members of the Indian Civil Service who have served in the Province. The medium for the transaction of public business is the Secretariat, the Staff of which consists of five Secretaries and five Under-Secretaries. The Chief Secretary is in charge of the Revenue, Appointment, General Administration, Political and Forest Departments; another Secretary attends to the Medical, Judicial, Police, Educational and Sanitation Departments; whilst a third looks to the local Self-Government, Financial, Municipal, Miscellaneous and Separate Revenue Departments. The other two Secretaries belong to the Public Works Department, and are also Chief Engineers, one of whom deals with Irrigation, and the other with Roads and Buildings. Government spends the cold weather, October to April, in Lucknow and Allahabad, mostly in Lucknow, the Secretariat moves between these two places. The Lieutenant-Governor and the Secretariat spend the hot weather in Naini Tal, but during the monsoon the Lieutenant-Governor tours the plains, as he does also in the cold weather. The Board of Revenue is the highest court of appeal in revenue and rent cases, and it has important executive duties, being the chief revenue authority in the Provinces. There are forty-eight British districts, thirty-six in Agra and twelve in Oudh, average area 2,000 square miles and average population a million. Each District is in charge of a District Officer, termed a Collector and Magistrate in Agra and a Deputy Commissioner and Magistrate in Oudh and Kumaon, who is an Indian Civilian. The Districts are grouped together in Divisions under a Commissioner. There are nine Divisions, having an average area of nearly 12,000 square miles and a population of from 5 to 6 millions.

The Districts are sub-divided into *tahsils*, of which there are 217, with an average area of 500 square miles and a population of 250,000. Each *Tahsil* is in charge of a *Tahsildar*, who is responsible for the collection of revenue, and also exercises judicial powers. *Tahsils* are divided into *parganas* which are units of importance in the settlement of land revenue. Subordinate to the *Tahsildars* are *kanungos*, of whom there are, on an average, three to a *tahsil*. These officials supervise the work of the *patwaris*, or village accountants, check their papers and form a link direct between the villagers and Government. For judicial purposes (revenue and criminal), the District Officer assigns a subdivision, consisting of one or more *tahsils*, as the case may be to each of his subordinates, who may be covenanted civilians, (Joint and Assistant Magistrates and Collectors) or members of the Provincial Service (Deputy Collectors and Magistrates). The Commissioner of the Bareilly and Kumaon Divisions are Political Agents for the Native States of Rampur and Tehri respectively and the Commissioner of Benares is the Political Agent for Benares State.

#### Justice.

Justice is administered by the High Court in the Province of Agra, and the Court of the Judicial Commissioner, in Oudh, which are the final appellate authorities in both criminal and civil cases. The former, which consists of a Chief Justice and five puisne Judges, two of whom are Indians, sits at Allahabad, and the latter, represented by a Judicial Commissioner and two Additional Commissioners, one of whom is an Indian, sits always in Lucknow. There are twenty-seven District and Additional District Judges, (Indian Civilians) twenty-one in Agra and six in Oudh, who have both original and appellate jurisdiction in civil and criminal cases, and occasional appellate jurisdiction in rent cases, but District Officers and their assistants, including *Tahsildars*, preside in both criminal and rent and revenue courts, and dispose of a good deal of the work. In Kumaon, the Commissioner is a High Court Judge in Civil cases, and a District Judge in Criminal cases. In the larger Cantonments, the Cantonment Magistrates have limited powers as Judges of a Small Cause Court. There are also Subordinate Judges, Judges of Small Cause Courts and Munsifs, who dispose of a large number of small civil suits, being specially empowered, in some cases, to decide suits up to Rs. 2,000, but generally they take cases up to Rs. 1,000, whilst Subordinate Judges hear cases up to Rs. 5,000. Appeals from Munsifs and Subordinate Judges go to the District Judges. Small Cause Court Judges try suits to the value of Rs. 500. There are also Honorary Munsifs, limited to Rs. 200 suits, and village Munsifs, whose jurisdiction is fixed at Rs. 20.

#### Local Government.

Local Government is exercised by means of District and Municipal Boards, the former levying local rates on land-owners; the latter deriving its revenue from octroi and other forms of taxation. The aim is to abolish octroi, because it interferes with through trade. Eighty-five Municipalities possess the privilege of electing their own members and some of them have non-official



**Chairmen.** They are generally composed of nominated and elected members, with an official Chairman, who guides them in their duties. They deal with questions of sanitation, communication, lighting, town improvement, roads, water supply, drainage and education. Grants are made to Boards by Governments in some cases for special purposes from general revenues. Local self government has been given a wider extension by the Municipalities Act, passed in 1916, under which the responsibilities of the boards and their chairmen have been largely increased. Small towns, termed Act XX towns, also enjoy some measure of local self-government and it is under consideration to extend the principle here, too.

### Finance.

The Financial history of the Province has not been a happy one, inadequate settlements, *i.e.*, contracts between the Government of India and the local Government, and the severe famine in 1896 having caused Provincial bankruptcy, which for a long time necessitated rigid economy in order to accumulate reserves which could be spent on productive works. Recently liberal Imperial assignments have been made by the Government of India and the financial prospects are accordingly much brighter, giving hopes that ambitious schemes of reform will be able to be carried into effect. The local Government gets 3-8 only of the land revenue. The Provincial Budget for 1916-17 shows an opening balance of 1.3 lakhs, revenue 673 lakhs, and expenditure 680 lakhs, and a closing balance of 1.9 lakhs.

### Public Works.

The Public Works Department is divided into the Roads and Buildings branch and the Irrigation branch, each of which is administered by a Chief Engineer, who is also a Secretary to Government. The Provinces are divided into three circles and ten divisions for the administration of roads and buildings, and into four circles and twenty divisions for irrigation purposes. Each circle is in charge of a Superintending Engineer, and each division is in charge of an Executive Engineer. The whole of the irrigation works constructed or maintained by Government are in charge of the Department, nearly all metalled roads, and also bridges on second-class roads, and generally, all works costing more than Rs. 1,000, except in Municipalities. The most important irrigation works within the last twenty years have been the construction of the Betwa Canal, the Fatehpur branch of the Lower Ganges Canal, the Mat branch of the main Ganges Canal, improvements in the Rohilkhand and Terai Canals and extensive drainage operations in the Doab districts of the Meerut and Agra division. Important irrigation extension works are now being considered. The budget for irrigation and other public works for the present year is 129 lakhs.

### Police.

The Police Force is divided into District and Railway Police and is administered by an Inspector-General, with five Deputies, one of whom is in charge of Railways, and two Assistants, forty-nine District Superintendents,

two Railway Superintendents, and thirty Assistant Superintendents. There is a Police Training School at Moradabad. There is a local C. I. D. forming a separate detective department, under a Deputy Inspector General, with an assistant. There is an armed police, specially recruited, and armed with the Martini Rifle. The present cost of the force is 126 lakhs. The administration of the Jail department is in charge of an Inspector-General of Prisons, who is a member of the Indian Medical Service.

### Education.

Education is in part wholly State-maintained; and partly by means of grants-in-aid. There is a State University at Allahabad, a Government Sanskrit College at Benares, whilst Arabic and Persian are taught in special classes at the Muir College, Allahabad, which also has a special science side, which of late has been greatly extended, and there is a Government Engineering College at Roorkee (Thomson College). There are aided Colleges in Lucknow (Canning College), (Reid Christian College), and (Isabella Thoburn College), Agra (St. John's), Aligarh (the Mahomedan Oriental College), Gorakhpur, Cawnpore and Meerut, and an unaided College at Benares, the Central Hindu College. In Lucknow there is the Martiniere school, an entirely independent institution, for European and Anglo-Indian children, and there is a Girls' Martiniere connected with it, whilst in the Hill-Stations, Naini-Tal and Mussorie, there are many excellent private scholastic institutions for European boys and girls, which are attended by students from all over India. Government maintain Training Colleges, for teachers in Lucknow and Allahabad, an Art Crafts and an Industrial School in Lucknow, and an Agricultural College at Cawnpore. Public Schools are almost entirely maintained by the District and Municipal Boards and primary education is almost entirely in their hands. Primary and female education are in a very backward condition and a Committee has recently been sitting at Naini Tal to suggest a remedy. Technical education is being pushed forward and there is a proposal to establish a Technological Institute in Cawnpore. At the close of 1912 there were 1688 urban schools, attended by 103,138 scholars and 10,003 rural schools attended by 482,355 scholars, and the number of secondary schools for Indian boys was 545, *viz.*, Anglo-Vernacular High Schools 102 with 42,611 scholars, Vernacular Middle Schools 375 with 45,378 scholars and English Middle Schools 68 with 10,284 scholars. The amount budgetted for education this year is 64½ lakhs.

Higher education is controlled by the Allahabad University (constd. in 1887) which consists of a Chancellor, Vice-Chancellor and seventy-five ordinary and four *ex-officio* Fellows, of whom some are elected by the Senate or by registered graduates and the Faculties, and the remainder nominated by the Lieutenant-Governor, in his capacity of Chancellor. The Faculties are those of Art, Science, Law and Medicine, and the University possesses an important Law School. It is proposed to establish a Mahomedan University at Aligarh and a Hindu University has been inaugurated at Benares.

The principal educational institutions are:—  
The Mahomedan Anglo-Oriental College,  
Aligarh—Principal, J. H. Towle.

The Central Hindu College, Benares—Principal,  
P. B. Adhikari, offg.

St. John's College, Agra—Principal, Rev.  
A. W. Davies.

Muir College, Allahabad—Principal, S. G.  
Jennings.

Queen's College, Benares—Principal, P. S.  
Bartel

Canning College, Lucknow—Principal, M. D.  
Cameron.

Agra College—Principal, T. Cuthbertson  
Jones.

Roid Christian College, Lucknow—Principal,  
Rev. T. C. Badley.

Meerut College—Principal, William Jesse.

Woodstock College, Mussoorie—Principal,  
Rev. H. M. Andrews.

Bareilly College—Principal, J. H. Alderson.  
Christian College, Allahabad—Principal, Rev.  
C. A. R. Janvier.

Christ Church College, Cawnpore—Principal,  
Rev. M. S. Douglas.

Isabella Thoburn College, Lucknow—Principal,  
Miss Robinson.

Thomason College, Roorkee—Principal, Lt.  
Col. E. H. de Vere Atkinson.

King George's Medical College, Lucknow—  
Offg. Principal, Major J. W. D. Megow, I.M.S.

### Medical.

The Medical Department is in charge of  
an Inspector-General of Civil Hospitals.  
A Civil Surgeon is in charge and is  
responsible for the medical work of each district,  
and in a few of the larger stations he has  
an assistant. In two stations (Ranikhet and  
Almora) Medical Officers in military employ  
hold collateral civil charge. There are eighty-  
three Assistant Surgeons in charge of important  
dispensaries and a large number of Indian  
hospital assistants. Lady doctors and female  
hospital assistants visit *purda nashin* women  
in their own homes and much good work is  
done in this manner.

The best equipped hospitals, for Indian patients  
are the Thomason Hospital at Agra and the  
Balrampur Hospital at Lucknow. The  
Ramsay Hospital for Europeans at Naini Tal is  
a first class institution and there are also the  
Lady Dufferin Hospitals. King George's Medical  
College and the hospital in connexion with it  
have been opened recently in Lucknow.  
The College is one of the best equipped in the  
country, with a staff of highly efficient professors,  
and the hospital is the first in the  
Provinces. There is an X-Ray Institute at  
Dehra Dun, where valuable research work has  
been carried out and the Pasteur Institute at Kasauli  
take cases from all parts of India, and  
there are sanatoria for British soldiers in the  
Hills.

### Administration.

Lieutenant-Governor, Sir J. S. Meston, K.C.S.I.

Assumed charge of office, 16th September 1912.

Private Secretary, W. K. Porter.

Honorary Aides-de-Camp, Lieut.-Col. P. H.  
Clutterbuck, Lieut.-Col. J. H. E. Beer, C.I.E.,  
V.D., Lieut.-Col. J. Walker, V.D., Hony. Capt.  
Subadar Major Chamu Singh Burathoki,  
Risaldar Major Quadrat Khan Bahadur.

### LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

President, The Lieutenant-Governor.

Vice-President, J. M. Holms, C.S.I.

### Members.

H. H. Nawab Sir Muhammad Hamid Ali, Khan  
Bahadur, G.C.I.E., G.C.V.O., Wall of Rampur.

Kunwar Aditya N. Singh, of Benares.

J. S. Campbell, C.S.I., C.I.R.

Raja Sir Muhammad Tasadduk Rasul Khan,  
K.C.S.I.

Nawab Mumtaz-ud-daula Sir Muhammad F.  
Ali Khan, K.C.I.E., K.C.V.O., C.S.I., of Pabasa.

A. W. Pim.

A. L. Saunders, C.S.I.

R. Burn.

G. T. Barlow.

W. S. Marriss.

S. P. O'Donnell.

A. H. Silver.

W. G. Wood.

Col. C. Mactaggart, C.I.E., I.M.S.

C. F. de la Fosse.

F. Mackinnon.

H. R. C. Hailey.

H. C. Ferard.

W. E. Crawshaw.

Rai Anand Sarup Bahadur.

Rai Prag Narayan Bhargava Bahadur.

John Mitchell Holms.

Mirza Sami Ullah Beg.

Tara Dat Gairola.

Dr. Sundar Lal.

Pandit Jagat Narayan.

Lala Madhusudan Dayal.

Munshi N. P. Asithana.

Moti Lal Nehru.

Rai Sadanand Pande Bahadur.

Maharaja Sir Bhagwati Prasad Singh, K.C.I.R.,  
of Balrampur.

Raja Kushalpal Singh.

Rai Ashbhuja Prasad Bahadur.

Satyid Raza Ali.

Rai Shankar Sahai Sahib.

Radha Kishan Das.

C. Y. Chintamani.

Gokaran Nath Misra.

Sukbir Singh.

Raja Chandra Chur Singh.

Babu Moti Chand.

Nawab Muhammad Abdul Majid.

Lodge P. Watson.

E. H. Ashworth.

Sayid Ali-Khan Bahadur.  
Sayid Wazir Hasan.

## SECRETARIAT.

*Chief Secretary to Government.* B. Burn.  
*Financial Secretary to Government.* A. W. Pim.  
*Judicial* " " S. P. O'Donnell.  
*Secretary to Government, Public Works Dept.*  
(Buildings & Roads, & Railways), W.G. Wood,  
C.S.I.  
*Secretary to Government, Public Works Dept.*  
(Irrigation), G. T. Barlow.  
*Registrars.* F.E. Lowe, A. Grant, W.J. Summers,  
F. C. Richardson.

## BOARD OF REVENUE.

*Members.* J. M. Holm, C.S.I., J. S. Campbell  
C.S.I., C.I.E.

## MISCELLANEOUS APPOINTMENTS.

*Opium Agent, Ghazipur.* C. E. Wild.  
*Director of Land Records and Agriculture.* H. R.  
C. Halley.  
*Director of Public Instruction.* C. F. de la Fosse.  
*Inspector-General of Police.* D. M. Straight.  
*Inspector-General of Civil Hospitals.* Col. C.  
MacTaggart, M. A., M.B., C.I.E., I.M.S.  
*Sanitary Commissioner.* Lieut.-Col. S. A. Harriss,  
I.M.S.  
*Inspector-General of Registration.* W. Raw.  
*Commissioner of Excise.* T. A. H. Way.  
*Accountant-General.* J. C. Mitra, M.A., P.L.  
*Inspector-General of Prisons.* Lt.-Col. S. H.  
Henderson, M.B., C.M., I.M.S.  
*Postmaster-General.* Lionel Truninger, C.I.E.  
*Chemical Analyser and Bacteriologist.* Dr. E. H.  
Hankin.

LIEUTENANT-GOVERNORS OF THE NORTH-  
WESTERN PROVINCES.

Sir C. T. Metcalfe, Bart., G.C.B. .. 1836

The Right Hon. the Governor-General 1838  
in the North-Western Provinces (Lord  
Auckland)

T. C. Robertson .. .. 1840

The Right Hon. the Governor-General 1842  
in the North-Western Provinces (Lord  
Ellenborough).

Sir G. R. Clerk, K.C.B. .. .. 1843

James Thomson. Died at Bareilly. .. 1843

A. W. Begbie, *In charge* .. .. 1853

J. R. Colvin. Died at Agra. .. .. 1853

E. A. Reade, *In charge* .. .. 1857

Colonel H. Fraser, C.B., Chief Commis- 1857  
sioner, N.-W. Provinces.

The Right Hon. the Governor-General 1858  
administering the N.-W. Provinces  
(Viscount Canning).

Sir G. F. Edmonstone .. .. 1859

R. Money, *In charge* .. .. 1863

The Hon. Edmund Drummond .. .. 1863

Sir William Muir, K.C.S.I. .. .. 1868

Sir John Strachey, K.C.S.I. .. .. 1874

Sir George Couper, Bart., C.B. .. .. 1876

LIEUTENANT-GOVERNORS OF THE NORTH-  
WESTERN PROVINCES AND CHIEF COMMIS-  
SIONERS OF OUDH.

Sir George Couper, Bart, C.B., K.C.S.I. 1877

Sir Alfred Comyns Lyall, K.C.B. .. .. 1882

Sir Auckland Colvin, K.C.M.G., C.I.E. .. 1887

Sir Chas. H. T. Crosthwaite, K.C.S.I. .. 1892

Alan Cadell (*Officiating*) .. .. 1895

Sir Antony P. MacDonnell, K.C.S.I. (a) .. 1895

Sir J. J. D. La Touche, K.C.S.I. .. .. 1901

(a) Afterwards (by creation) Baron MacDonnell.

LIEUTENANT-GOVERNORS OF THE UNITED  
PROVINCES OF AGRA AND OUDH.

Sir J. J. D. La Touche, K.C.S.I. .. .. 1902

Sir J. P. Hewett, K.C.S.I., C.I.E. .. .. 1907

L. A. S. Porter, C.S.I. (*Officiating*) .. .. 1912

Sir J. S. Meston, K.C.S.I. .. .. 1912

## The Punjab.

The Punjab, or land of the five rivers, is so called from the five rivers by which it is enclosed, namely, the Jhelum, Chenab, Ravi, Beas and Sutlej. Together with the North-West Frontier Province and the Native State of Jammu and Kashmir which lie to the north, the Punjab occupies the extreme north-western corner of the Indian Empire, and with the exception of the above-mentioned province, comprises all of British India north of Sind and Rajputana and west of the river Jumna. Previous to October 1912, the Punjab with its feudatories embraced an area of 136,330 square miles and a population at the Census of 1911 of 24,187,750 (inclusive of 28,587 trans-frontier Baluchis) that is to say, about one-thirteenth of the area and population of the Indian Empire. But the formation of a separate province of Delhi reduced the area and population of the Punjab by about 450 square miles and 380,000 souls respectively. Of the total area of the Punjab, 36,551 square miles are in Native States (34 in number) with a population of 4,212,794, and 2,566 square miles are tribal territory on the western border of Dera Ghazi Khan district with a population of 28,587.

### Physical Features.

The greater part of the Punjab consists of one vast alluvial plain, stretching from the Jumna in the east to the Suleman Range in the west. The north-east is occupied by a section of the Himalayas and the Salt Range forms its north-western angle. A few small spurs of the Aravalli mountain system traverse the extreme south-east and terminate in the Ridge at Delhi. The Punjab may be divided into five natural divisions. The Himalayan tract includes an area of 22,000 square miles, with a scanty population living scattered in tiny mountain hamlets. The Salt Range tract includes the districts of Attock, Rawalpindi and Jhelum and part of Shahpur district. Its physical configuration is broken and confused and the mountainous tracts of Murree and Kahuta approximate closely in characteristics to the Himalayan tract. Except in the hills, the rainfall leaves little margin for protection against distress in unfavourable seasons and irrigation is almost unknown. Skirting the base of the hills and including the low range of the Siwaliks, runs the narrow sub-montane tract. This tract, secure in an ample rainfall, and traversed by streams from the hills, comprises some of the most fertile and thickly populated portions of the province. Its population of over four millions is almost wholly agricultural and pastoral but it includes one large town in Sialkot. Of the plains of the Punjab, the eastern portion covers an area of some 36,000 square miles with a population of 10½ millions. East of Lahore, the rainfall is everywhere so far sufficient that cultivation is possible without irrigation in fairly favourable seasons, but over the greater part of the area the margin is so slight that, except where irrigation is employed, any material reduction in the rainfall involves distress, if not actual famine. Within the eastern plains lie the large cities of Lahore and Amritsar, and the population in comparison with the western Punjab

is largely urban. The western plains cover an area of 59,000 square miles, with a population of a little over six millions. The rainfall in this area, heaviest in the north and east and decreasing towards the west and south, is everywhere so scanty that cultivation is only possible with the aid of artificial irrigation or upon the low-lying river-banks left moist by the retreating floods. In this very circumstance, these tracts find their scarcity against famine, for there cultivation is almost independent of rain, a failure of which means nothing worse than a scarcity of grass. So little rain is sufficient, and absolute drought occurs so seldom that the crops may be said never to fail from this cause. The western plains embrace the great colony areas on the Lower Chenab and Lower Jhelum Canals which now challenge the title of the eastern plains as the most fertile, wealthy and populous portions of the province. Multan and Lyallpur are the largest towns in the western area. Owing to its geographical position, its scanty rainfall and cloudless skies, and perhaps to its wide expanse of untilled plains, the climate of the Punjab presents greater extremes of both heat and cold than any other portion of India. The summer, from April to September, is scorchingly hot, and in the winter, sharp frosts are common. But the bright sun and invigorating air make the climate of the Punjab in the cold weather almost ideal.

### The People.

Of the population roughly one half is Mahomedan, three-eighths Hindu and one-eighth Sikh. Socially the landed classes stand high and of these the Jats, numbering nearly five millions, are the most important. Roughly speaking, one half the Jats are Mahomedan; one-third Sikh and one-sixth Hindu. In distribution they are ubiquitous and are equally divided over the five divisions of the province. Next in importance come the Rajputs, who number over a million and a half. The majority of them are Mahomedans by religion; about a fourth are Hindus and a very few Sikhs. They are widely distributed over the province. Both Jats and Rajputs of the Punjab provide many of the best recruits for the Indian Army. The Gujars are an important agricultural and pastoral tribe, chiefly found in the eastern half of the province and in the extreme north-west. In organisation they closely resemble the Jats and are often absorbed into that tribe. There are many minor agricultural tribes, priestly and religious castes (Brahmans, Sayads and Kureshis), most of whom are landholders, the trading castes of the Hindus (Khatris, Aroras and Banias) and trading castes of the Mahomedans (Khojas, Parachas and Khakhas), and the numerous artisan and menial castes. There are also vagrant and criminal tribes, and foreign elements in the population are represented by the Baluchis of Dera Ghazi Khan and neighbouring districts in the west, who number about half a million and maintain their tribal system, and the Pathans of the Attock and Mianwali districts. Pathans are also found scattered all over the province engaged in

horse-dealing, labour and trade. A small Tibetan element is found in the Himalayan districts.

### Languages.

The main language of the province is Punjabi, which is spoken by more than half the population. Western Punjabi may be classed as a separate language, sometimes called *Eahndi*, and is spoken in the north and west. The next most important languages are Western Hindi, which includes Hindustani, Urdu (the polished language of the towns) and other Hindi; Western Pahari, which is spoken in the hill tracts; and Rajasthani, the language of Rajputana. Baluchi, Pushto, Sindhi and Tibeto-Burman languages are used by small proportions of the population.

### Agriculture.

Agriculture is the staple industry of the province, affording the main means of subsistence to 56 per cent. of the population. It is essentially a country of peasant proprietors. About one-sixth of the total area in British districts is Government property, the remaining five-sixths belonging to private owners. But a large part of the Government land is so situated that it cannot be brought under cultivation without extensive irrigation. Thus the Lower Chenab Canal irrigates nearly 1,900,000 acres of what was formerly waste land and the Lower Jhelum Canal, 390,000 acres, and the Lower Bari Doab Canal, when the colonisation scheme is completed, will add 1,200,000 acres to this total. Large areas in the hills and elsewhere which are unsuited to cultivation are preserved as forest lands, the total extent of which is about 8,700 square miles. Of the crops grown, wheat is the most important and the development of irrigation has led to a great expansion of the wheat area, which now occupies in an average year over 8½ millions of acres. The average annual outturn of wheat is 3,000,000 tons, valued at present prices at approximately £20,000,000. Next in importance to wheat is gram, the average annual produce of which is a million tons valued at £5,000,000. Other important staples are barley, rice, millets, maize, oilseeds (rape, toria and sesamum,) cotton and sugarcane. Cotton is grown generally throughout the province but the ravages of boll-worm have affected the popularity of the crop. The cotton grown is of the short stapled variety, known as 'Bengals'. The country being preponderantly agricultural, a considerable proportion of the wealth of the people lies in its live-stock. The latest cattle census gives the following figures:—cattle, nearly 8,000,000 head; buffaloes, about 850,000; bovine young stock, 3,800,000; sheep, 4,500,000, goats, 4,250,000. Large profits are derived from the cattle and dairy trades and wool is a staple product in the south-west in Kulu and Kangra and throughout the plains generally. The production of hides and skins is also an important industry.

### Industries.

The mineral wealth of the Punjab is small, rock salt, saltpetre, and limestone for road-building being the most important products. There are some small coal mines in the Jhelum district, with an output of about 50,000 tons a year, and gold-washing is carried on in most

of the rivers, not without remunerative results. Iron and copper ores are plentiful but difficulties of carriage and the absence of fuel have hitherto prevented smelting on a large scale. The Punjab is not a large manufacturing country, the total number of factories being only 224, the majority of which are devoted to cotton spinning, cleaning and pressing. Cotton weaving as a domestic industry is carried on by means of hand looms in nearly every village. The Salvation Army has shown considerable enterprise in improving the hand-weaving industry. Blankets and woollen rugs are also produced in considerable quantities and the carpets of Amritsar are famous. Silk-weaving is also carried on and the workers in gold, silver, brass, copper and earthenware are fairly numerous and ivory carving is carried on at Amritsar and Patiala. The trade of the province is steadily expanding, the total internal trade being valued at 65½ crores of rupees. The external trade with Afghanistan, Ladakh and Tibet is valued at 34 lakhs.

### Administration.

The administrative functions of Government are performed by a Lieutenant-Governor, appointed by the Governor-General with the approval of the Crown. The Lieutenant-Governor in practice is always a member of the Indian Civil Service though military members of the Punjab Commission are eligible for the position. The Punjab Commission, the body which is responsible for the Civil administration of the province, is recruited from the Indian Civil Service and the Provincial Civil Service. Up to the date of the separation of the North-West Frontier Province from the Punjab, one-fourth of the cadre was drawn from the Indian Army. The business of Government is carried on through the usual Secretariat which consists of three Secretaries, designated (1) Chief, (2) Revenue and (3) Financial Secretaries, and three Under-Secretaries. There is also at present an Additional Secretary. In the Public Works Department, there are also three Secretaries (Chief Engineers), one in the Buildings and Roads Branch and two in the Irrigation Branch. The heads of the Police and Educational Departments are also Under-Secretaries to Government. The Government spends the winter in Lahore and the summer (from the middle of May to the middle of October) in Simla. The Lieutenant-Governor has no Executive Council, but is assisted in legislative business by a Legislative Council of 28 members, of whom 11 are elected and 17 nominated by the Lieutenant-Governor. Of the nominated members, not more than 11 may be officials, in addition there may be two nominated expert members. Under the Lieutenant-Governor, the province is administered by five Commissioners (for Ambala, Jullundur, Lahore, Rawalpindi and Multan) who exercise general control over the Deputy Commissioners—28 in number—each of whom is in charge of a district. A district on an average contains four tahsils, each consisting of about 300 villages. The Deputy Commissioner is usually a Covenanted Civilian or military member of the Punjab Commission, although five Deputy Commissionerships are "listed" for Provincial Civil Servants. The Deputy Commissioner has under him one or more Assistant Commissioners (Coven-

anted Civilians) and one or more Extra Assistant Commissioners (Provincial Civilians). In some cases, one or more tahsils form a sub-division under the charge of a sub-divisional officer who has wide powers. The tahsil is in charge of a Tahsildar, in some cases assisted by one or more Naib Tahsildars. The village is under a Lambardar or headman and in most districts the villages are grouped into zails, each under a zaildar. The lambardars and zaildars are "village officers" and not Government-servants. The district Land Records and Excise staff, though organised for special departmental purposes, is available for general administrative work. The Native States of the province are arranged for the purposes of supervision into five groups, each under the charge of a Political Agent. Except in the case of the Sikh Phulkian States (Patiala, Jhind and Nabha) and the Bahawalpur Agency, the Political Agent is either the neighbouring Commissioner or Deputy Commissioner. The principal heads of Department in the province are the two Financial Commissioners (who are the highest Court of Revenue jurisdiction, and heads of the departments of Land and Separate Revenue and of Agriculture and the Court of Wards), the three Chief Engineers, the Inspector-General of Police, the Director of Public Instruction, the Inspector-General of Prisons, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Conservator of Forests, the Director of Agriculture and Industries, the Inspector-General of Registration, the Registrars of Co-operative Credit Societies and Joint Stock Companies and the Legal Remembrancer. The Accountant-General, the Postmaster-General, the Director of Telegraph Engineering, and the Agent, North-Western Railway, represent Imperial Departments under the Government of India.

### Justice.

The administration of justice is entrusted to a Chief Court, which is the final appellate authority in civil and criminal cases, and has powers of original criminal jurisdiction in cases where European British subjects are charged with serious offences and original civil jurisdiction in special cases. The Court sits at Lahore and is composed of a Chief Judge and four puisne judges (either Civilian or barristers), a sixth additional judge whose appointment is sanctioned for two years and a seventh and eighth additional judge whose appointment is sanctioned for one year. For some years past there has been a strongly supported movement in the province in favour of raising the Court to the status of a High Court, and the Secretary of State last year sanctioned the proposal though the chance will not take effect till after the war. Subordinate to the Chief Court are the District and Sessions Judge (22 in number) each of whom exercises civil and criminal jurisdiction in a civil and sessions division comprising one or more districts. They hear most of the first appeals in Civil suits and try sessions cases and hear criminal appeals from the district and first class magistrates. One or two divisions have an additional judge and in many districts a Subordinate Judge exercising unlimited civil jurisdiction, is appointed to assist the District Judge but the majority of civil suits are tried in the first

instance by Munsifs whose jurisdiction is limited to suits not exceeding Rs. 1,000 in value. The assistants to Deputy Commissioners are always invested with the powers of a Munsif, but the former practice of investing Tahsildars with Munsif's powers is being gradually discontinued. At Lahore, Amritsar and Simla there are Courts of Small Causes. The Deputy Commissioner is the District Magistrate and controls the subordinate Criminal Courts of the District. All the assistants of the Deputy Commissioner as well as the District and Subordinate Judges, but not the Munsifs, are invested with magisterial powers. Tahsildars usually exercise the powers of a second class magistrate and Naib Tahsildars those of the third class, and considerable assistance is obtained from Honorary Magistrates who sit either singly or as a bench. In districts in which the Frontier Crimes Regulation is in force the Deputy Commissioner on the finding of a Council of Elders (Jirga) may pass sentence up to four years imprisonment. In all cases capital sentences require the confirmation of the Chief Court. Special Revenue Courts to decide all suits regarding tenant right, rents and cognate matters in which civil courts have no jurisdiction have been established under the Punjab Tenancy Act. The Financial Commissioners are the final court of appeal in revenue cases.

### Local Government.

Local control over certain branches of the administration is secured by the constitution of district boards exercising authority over a district and of municipalities exercising authority over a city or town. A few districts have local boards which exercise authority over a tahsil. These bodies are composed of members either nominated by Government or elected by the people and they are empowered to spend the funds at their disposal on schools and dispensaries, vaccination, sanitation, roads and rest houses and general improvements. The funds of district boards are derived mainly from a cess on the land revenue of the district supplemented by grants from Provincial Funds, and those of municipalities from octroi, local taxation and Government grants. In the smaller towns which are known as "notified areas", a simpler form of government than the municipal system is in force. Where the elective principle is in force as regards both district boards and municipalities, the public shows very little interest in the election, except in a few cases where sectarian feeling runs high.

### Finance.

Under the present system of decentralisation in finance, the Imperial Government delegates to the Punjab Government the control of expenditure on the ordinary administrative services together with the whole or a certain proportion of certain heads of revenue sufficient to meet those charges. Of the various heads of revenue post office, telegraphs, railways, opium and salt are entirely Imperial. Land revenue, stamps, excise, income-tax and major irrigation works are divided between the Imperial and Provincial Governments in the proportion of one half to each. Minor irrigation works and some minor heads are divided in varying proportions, while the

revenue from forests, registration, courts of law, jails, police and education are wholly provincial as well as the income of district boards and municipalities. The Budget for 1916-17 shows a total revenue (including opening balance) of Rs. 5,23,67,000, and a total expenditure of Rs. 4,78,26,000 leaving a closing balance of Rs. 55,41,000.

### Public Works.

As was stated in the section on "Administration" the Public Works Department is divided into two branches, one for Buildings and Roads and the other for Irrigation. In the former branch, under the Chief Engineer, the province is divided into three circles under Superintending Engineers and 11 divisions under Executive Engineers. The primary object of this branch is the construction and maintenance of Imperial and Provincial works, but it also assists municipalities and district boards. The Irrigation branch is under two Chief Engineers, one of whom is also Chief Engineer of Irrigation Works in the North-West Frontier Province. Under them are nine Superintending Engineers in charge of circles and 39 Executive Engineers in charge of divisions. In addition to the work of construction and maintenance Irrigation Officers are responsible for the assessment of water rates leviable on irrigated areas and in several districts where the land revenue demand is assessed on the fluctuating principle, for the formulation of this demand on irrigated crops as well.

### Irrigation.

The canal system of the Punjab is admittedly one of the greatest achievements of British rule in India. Not including the enormous Triple Canal project recently completed, the total irrigated area in British districts and Native States amounts to 8,269,233 acres. The Beas is the only one of the great rivers of the province from which no canal takes off. The Indus provides supplies for two large series of inundation canals, one on either bank. Taking off from the Jhelum is the Lower Jhelum perennial canal, with 150 miles of main channel and 1,000 miles of distributaries and lower down the river is a large series of inundation canals. The Lower Chenab perennial canal takes off from the Chenab and comprises 427 miles of main channel and branches and 2,278 miles of branches, while below the junction of the Chenab and Ravi rivers is a series of inundation canals on both banks. The Ravi provides supplies for the Upper Bari Doab Canal, which has 370 miles of main line and branches and 1,571 miles of distributaries. Some small inundation canals and the Sidhani system with a length of 200 miles also take off from the Ravi. The Sirhind Canal, which has a main line and branches of 538 miles and distributaries amounting to 3,703 miles, takes off from the Sutlej, and there are two systems of inundation canals deriving their supplies from the Upper and Lower Sutlej respectively in addition to the Grey Canals maintained on the co-operative system in the Ferozepore district and a vast series of inundation canals in Bahawalpur State. The Western Jumna Canal, which

takes off from the right bank of the Jumna, has a main line and branches of 377 miles and distributaries of 1,764 miles. The Triple Canal project is intended to carry surplus water from the Jhelum and the Chenab to supplement the scanty supplies in the lower reaches of the Ravi and incidentally to afford irrigation to the tracts through which the supply channels pass. The three canals included in the project are known as the Upper Jhelum, Upper Chenab and Lower Bari Doab Canals. Of these the Upper Chenab was opened in April 1912 and the Lower Bari Doab in April 1913 and the Upper Jhelum in December 1915. The most interesting feature of this great work is the level crossing at Balloki, 40 miles from Lahore, where the Upper Chenab canal supply is passed across the Ravi into the Lower Bari Doab Canal. The revised estimate of the cost of the whole scheme is £6½ millions. The scheme is expected to serve an area of 1,570,000 acres annually.

### Police.

The Police force is divided into District and Railway Police. The combined force is under the control of the Inspector-General, who is a member of the gazetted force and has under him three Deputy Inspector-Generals, for the Eastern (Ambala), Central (Lahore) and Western (Rawalpindi) Ranges respectively and a fourth Deputy Inspector-General in charge of Railway Police, Criminal Investigation, the Police Training School and Finger Print Bureau at Phillaur. The Railway Police are divided into two districts, Northern and Southern, each under a Superintendent. The District Police are controlled by Superintendents, each of whom is in charge of a district, and has under him one or more Assistant Superintendents. The district is divided into circles under charge of Inspectors, and again into thanas in charge of a Sub-Inspector. The staff of a thana consists on an average of one Sub-Inspector, two head constables and 10 constables. A service of Provincial Police officers has also been established consisting of 18 Deputy Superintendents, who are employed as assistants to the Superintendents. The total police force of the province exclusive of gazetted officers, consists of 1,075 officers and about 20,000 men, practically half of whom are armed with revolvers and bored out rifles. The village police or chaukidars are under the control of the Deputy Commissioner of each district not of the Police Superintendent. The cost of the Police Force is 58½ lakhs.

### Education.

Although the Punjab is usually considered rather a backward province, education has made great strides especially in the last ten years. Government maintain the Government College at Lahore, the Central Training College at Lahore, a Training Class for European teachers at Sanawar (Simla Hills), normal schools at the headquarters of each division, and High Schools at the headquarters of each district, and the Lawrence Military Asylum at Sanawar for European children. There are in the province nine arts colleges (one of them Oriental); 6 professional colleges for males and 1 for females; 111 High

Schools for boys and 16 for girls; 241 middle schools for boys and 43 for girls; 4,552 Primary Schools for boys and 878 for girls; 54 schools for special instruction for boys and 12 for girls. The number of pupils attending schools of all classes is 332,043 boys and 47,446 girls. The nine arts colleges are:—The Government, Oriental, Forman Christian, Dayanand, Islamia and Dayal Singh Colleges at Lahore; Khalsa, Amritsar; Murray, Sialkot; Gordon, Rawalpindi. Professional education is represented by the Law, Medical and Veterinary Colleges at Lahore, the Agricultural College at Lyallpur, the Clerical and Commercial School at Amritsar, the Engineering School at Rasul, the Mayo School of Art and the Railway Technical School, both at Lahore. There are eight Industrial Schools in the Province maintained by Municipalities or District Boards and others maintained by Missionary bodies, the Arya Samaj, etc., which receive grants-in-aid. The education of the domiciled community is provided for by a number of secondary boarding schools in hill stations and of primary schools in the plains. The aristocracy of the province is provided for by the Alchison Chiefs' College for boys and the Queen Mary's College for girls, both at Lahore.

The Education Department is administered by the Director of Public Instruction, who has under him an Inspector of Schools in each civil division with two or more assistants, a District Inspector, with assistants, in each district, two Inspectresses of girls' schools and an Inspector of European schools. Higher education is controlled by the Punjab University (incorporated in 1882) which has the Lieutenant-Governor as *ex-officio* Chancellor, a Vice-Chancellor appointed by Government and a Senate. In addition to the nine arts colleges already mentioned and the Law and Medical Colleges at Lahore, St. Stephen's College, Delhi, and the Hindu College, Delhi, and six other colleges in Kashmir, Patiala, Bahawalpur, Kapurthala and the North-West Frontier Province are affiliated to the Punjab University.

### Medical.

The Medical Department is controlled by the Inspector-General of Civil Hospitals (a member of the Indian Medical Service) who also supervises the departments of the Chief Plague Medical Officer and the Chief Malaria Medical Officer. Sanitation is controlled by the Sanitary Commissioner (also a member of the Indian Medical Service) who has under him two Deputy Sanitary Commissioners and is advised by the Sanitary Board, with the Sanitary Engineer as Technical Adviser. Medical work in the districts is in charge of the Civil Surgeons, of whom fourteen are members of the Indian Medical Service and others Military Assistant Surgeons and uncommissioned Medical Officers, chiefly Civil Assistant Surgeons. The Mayo Hospital at Lahore and special railway, canal and police hospitals are maintained by Government, but the ordinary hospitals and dispensaries in the districts are maintained by municipal or district funds. Certain private institutions such as the Walker Hospital at Simla and many mission dispensaries receive grants-in-aid. The

Mayo Hospital at Lahore has been greatly extended and improved as a memorial to King Edward VII, and was formally opened by Lord Hardinge in December 1915. The total number of patients treated at all hospitals and dispensaries in the year is over four and a half millions, including nearly 75,000 in-patients. A temporary department to combat plague has been organised under the Chief Medical Plague Officer. In the districts the Civil Surgeons are generally in charge of the operations against plague, but additional officers are employed from time to time. There is only one lunatic asylum in the Province at Lahore, but there are ten leper asylums. The Pasteur Institute at Kasauli performs the functions of a provincial laboratory for the Punjab. Vaccination is supervised by the Sanitary Commissioner, but is more particularly the concern of the Deputy Sanitary Commissioner, who has under him a special staff. Civil Surgeons also have a local staff of vaccinators under them.

### Administration.

*Lieutenant-Governor*, Sir M. F. O'Dwyer, K.C.S.I.  
Assumed charge 1913.

### PERSONAL STAFF.

*Private Secretary*, Lieut.-Col. E. C. Bayley,  
C.I.E., I.A.

*Honorary Aides-de-Camp*, Lieut.-Col. W. T. Wright, Hon. Capt. Ghulam Muhammad Khan, Hon. Capt. Surja, and Hon. Capt. Bishn Singh.

### LEGISLATIVE COUNCIL.

*President*, The Lieutenant-Governor.

### MEMBERS.

#### *Nominated.*

H. J. Maynard, C.S.I., I.C.S.

J. C. Godley, C.S.I.

O. F. Lumsden, I.C.S.

T. R. J. Ward, C.I.E.

Col. H. Hendley, M.D., I.M.S.

H. D. Craik, I.C.S.

C. A. H. Townsend, I.C.S.

P. J. Fagan.

S. W. Gracey.

Sardar Bahadur Gajjan Singh.

Khwasah Yusuf Shah, Khan Bahadur.

Rai Bahadur Ram Saran Das, C.I.E.

J. P. Thompson.

Rai Bahadur Pandit Sheo Narayan.

Nawab Sir Bahran Khan.

E. W. Parker.

Sardar Bahadur Biscaldar Partab Singh.

#### *Elected.*

J. Currie.

Lala Jowahar Lal Bhargava.

Raivada Bhagat Ram.

Sayad Makhdum Rajan Shah.

Dewan Bahadur Dewan Daulat Rai.



**Bakhshi Sahar Lal of Lahore.**  
**Malik Muhammad Amin Khan of Shamsabad.**  
**Chaudhri Lal Chand.**  
**Khan Sahab Mirza Ikram Ullah Khan.**  
**Khan Bahadur Sayad Mehdi Shah.**  
**Khan Bahadur Mian Fazl-i-Husain.**  
**Secretary, S. W. Gracey.**

## SECRETARIAT.

**Chief Secretary, J. P. Thompson, I.C.S.**  
**Revenue Secretary H. D. Craik, I.C.S.**  
**Financial Secretary, O. F. Lumsden.**  
**Registrar, W. Burt-Bryan, I.S.O.**

## PUBLIC WORKS DEPARTMENT.

*Irrigation Branch.*

**Secretaries, T. R. John Ward, C.I.E.; W. F. Holms.**

*Buildings and Roads Branch.*

**Secretary, D. W. Atkman, C.I.F.**

## REVENUE DEPARTMENT.

**Financial Commissioners, Sir A. H. Diack, C.V.O.;**  
**Officiating, H. J. Maynard, I.C.S., and P. J. Fagan, I.C.S.**

**Director of Agriculture and Industries, C. A. B. H. Townsend, B.A., I.C.S.**

**Director of Land Records, Inspector-Genl. of Registration, and Registrar-General, D. J. Boyd.**

## MISCELLANEOUS APPOINTMENTS.

**Director of Public Instruction, J.C. Godley, C.S.I.**  
**Inspector-General of Police, Lieut.-Col. H. T. Denny, I.A.**

**H. A. Closs (N.-W. Frontier Province).**  
**Conservator of Forests, B. McIntosh.**  
**Inspector-General of Civil Hospitals, Colonel Harold Hendley, M.D., I.M.S.**  
**Sanitary Commissioner, Lt.-Col. Sydney Browning Smith, D.P.H., I.M.S.**  
**Inspector-General of Prisons, Major F. L. Ward,**  
**Accountant-General, W. Alder, I.C.S.**  
**Postmaster-General, G. R. Clark, I.C.S.**  
**Registrar of Co-Operative Credit Societies and Joint Stock Companies, H. Calvert, B.S.C.**

## LIEUTENANT GOVERNORS OF THE PUNJAB.

Sir John Lawrence, Bart., G.C.B. ..	1859
Sir Robert Montgomery, K.C.B. ..	1859
Donald Friell McLeod, C.B. ..	1865
Major-General Sir Henry Durand, K.C.S.I., C.B., died at Tonk, January 1871.	1870
R. H. Davies, C.S.I. ..	1871
B. E. Egerton, C.S.I. ..	1877
Sir Charles U. Aitchison, K.C.S.I., C.I.E.	1882
James Broadwood Lyall ..	1887
Sir Dennis Fitzpatrick, K.C.S.I. ..	1892
William Mackworth Young, C.S.I. ..	1897
Sir C. M. Rivaz, K.C.S.I. ..	1902
Sir D. C. J. Ibbetson, K.C.S.I., resigned 22nd January 1908.	1907
T. G. Walker, C.S.I. (offg.) ..	1907
Sir Louis W. Dane, K.C.I.E., C.S.I. ..	1908
James McCrone Douie (offg.) ..	1911
Sir M. F. O'Dwyer, K.C.S.I. ..	1913

## Burma.

The Province of Burma lies between Assam on the North-West and China on the North-East, and between the Bay of Bengal on the West and South-West and Slam on the South-East. Its area, including the district of Putao constituted in February 1914, is approximately 270,000 square miles, of which 172,000 are under direct British Administration, 31,000 belong to independent and 67,000 to semi-independent Native States. The main geographical feature of the country is the series of rivers and hills running fan-like from North to South with fertile valleys in between, widening and flattening out as they approach the Delta. On the West are the high hills of the Chin country, Manipur and Assam, and on the East the uplands of the Shan States. On the South are the hill ranges of Slam. The country is divided East and West by the Dry Zone, which has most of the features of the highlands of India. South and North of this are the Wet Zones with a rich tropical vegetation. The climate of the Dry Zone resembles that of Behar. The temperature in May rising to 116°, the climate of the Wet Zones is moist but fairly equable. The magnificent rivers, the number of hilly ranges (Yomas) and the abundance of forests, all combine to make the scenery of Burma exceedingly varied and picturesque.

### The People.

The total population of Burma at the census of 1911 was 12,115,217. Of this total, 7,642,204 are Burmans, 996,420 Shans, 919,641 Karens, 239,953 Kachins, 306,486 Chins, 344,123 Arakanese and 320,629 Talaings. There is also a large alien population of 108,877 Chinese and about 600,000 Indians, while the European population is 24,355.

The Burmans, who form the bulk of the population, belong to the Tibetan group and their language to the Tibeto-Chinese family. They are essentially an agricultural people, 80 per cent. of the agriculture of the country being in their hands. Their chief concern is with their fields and their pagodas. As long as they are left in peaceful enjoyment of these, they are apparently indifferent as to the Government of the country. In appearance the Burman is usually somewhat short and thick-set with Mongolian features. His dress is most distinctive and exceedingly comfortable. It consists of a silk handkerchief bound round his forehead, a loose jacket on his body and a long skirt or loongyi tied round his waist, reaching to his ankles. The Burman women, perhaps the most pleasing type of femininity in the East, lead a free and open life, playing a large part in the household economy and in petty trading. Their dress is somewhat similar to the man's, minus the silk kerchief on the head, and the loongyi is tucked in at the side instead of being tied in front. A well dressed and well groomed Burmese lady would, for grace and neatness, challenge comparison with any woman in the world.

### Communications.

The Irrawaddy, and to a less extent the Chindwin, afford great natural thoroughfares to the country. At all seasons of the year these rivers, especially the Irrawaddy, are full

of sailing and steam craft. In the Delta, the network of waterways is indeed practically the only means of communication. The Irrawaddy Flotilla Company, with a fine fleet of mail, cargo and ferry boats, gives the Irrawaddy and the Delta rivers and creeks a splendid river service.

The Burma Railways Company has a length of 1,600 miles open line. The principal lines are from Rangoon to Mandalay; from Sagaing to Myitkyina, the most northern point in the system; the Rangoon-Prome line; and the Pegu-Martaban line, which serves Moulmein on the further bank of the Salween River. An important branch line runs from Thazi on the main line across the Meliktila and Myingyan Districts to Myingyan Town on the Irrawaddy. Another branch goes from Sagaing on the Irrawaddy to Alon on the Chindwin. A small branch on the Sagaing-Myitkyina line runs from Naba to Katha on the Irrawaddy. A branch on the right bank of the Irrawaddy runs from Bassein to Kyangin. A ferry at Hengaza connects this branch with another branch running from Letpadan on the Prome line to the left bank of the Irrawaddy at Tharawaw. An important line, the Southern Shan States Railway, is open as far as Aungmye, 7 miles beyond Kalaw, the future hill-station of the province, and 70 miles from Thazi, the junction with the Rangoon-Mandalay main line. The new line will end thirty miles further East at Yawngwe, the principal town in the rich valley of the Nam Piu.

The length of metalled roads is 2,008 miles and of unmetalled roads 9,712. The number of roads is for a rich province like Burma quite inadequate. One of the most urgent needs of the Province is a very generous extension of roads both metalled and unmetalled. The newly-constituted Committee on Roads and Communications will no doubt effect rapid improvement.

### Industry.

Agriculture is the chief industry of the province and supports nearly three-fourths of the population. The nett total cropped area in 1915-16 was 14,237,930 acres, of which more than a million acres was irrigated land. The main crop is paddy, of which 2,191,769 tons were exported. This total is lower than in any of the previous nine years except 1911-12, and the price realized was lower than in any of those years, being six hundred lakhs of rupees below the best previous year. India took nearly half the export. The scarcity of tonnage and the prohibitive cost of freight greatly hampered the foreign trade. Rice forms 57 per cent. of the total exports. Over 4,000 tons of cotton were produced, 97,000 tons of groundnuts, and 94,000 tons of sesamum. Maize (68,000 tons) and millet (54,000 tons) are the other chief crops.

Forests play an important part in the industrial life of the Province. The total area of reserved and unclassified forests is 142,366 square miles. Wood is extracted by lessees, of whom the Bombay-Burma Trading Corporation and Messrs. Steel Brothers are the principal. In 1914-15, Government extracted 52,000 tons of teak, 2,300 tons of sal, 2,300 tons of

A third important branch of industry consists of working mines and quarries, in which Burma is particularly rich. The petroleum fields are in the Dry Zone, chiefly at Yenangaung in the Magwe District where the principal extractor is the Burma Oil Company. The total output of petroleum for the Province in 1915 was 282½ million gallons, the highest yet recorded. In the Ruby Mines District, the Burma Ruby Mines Company at Mogok produced in 1915 stones valued at \$38,000. 182 ounces of gold were won by the Burma Gold Dredging Company from the bed of the Irrawaddy River, north of Myitkyina.

The Burma Mines Company at Bawdwin in the Northern Shan States produced 32,587 tons of lead slag, valued at Rs. 15½ lakhs and 4,027 tons of silver lead ore valued at 3 lakhs. Other minerals were unimportant. Even Zinc, for which there was great demand, was exported only to the extent of 87 tons, because Antwerp and Hamburg were the only places at which the ore could be treated. The Tawmaw Mines of the Myitkyina District produced 185 tons of jade, valued at Rs. 2 lakhs.

Tungsten ores, chiefly wolfram, are mined in Tavoy, Mergui and the Southern Shan States. Burma is the chief source of the world supply of these ores. The exports in 1915-16 were 2,700 tons valued at 53 lakhs, an increase of 37 per cent. in quantity and 100 per cent. in value compared with the previous year. The full effect of the measures taken to improve communications and facilitate output in the mining area has not yet been felt.

The rubber industry is still in its infancy, only 10 plantations employing more than 20 persons. The plantations are situated in the Mergui, Amherst, Hanthawaddy and Toungoo Districts. At the Census of 1911, 4,047 people were returned as engaged in the production of rubber. The total quantity exported in 1915-16 was 11,482 cwts. valued at over 30 lakhs. The increase in quantity was 30 per cent. and in value 52 per cent. compared with the previous year. The prospect of rubber in this Province is very promising, but the estimates of the output in the immediate future have been framed in the sanguine spirit of the company promoter and are not likely to be realized.

### Manufactures.

There are 450 factories, 258 of which are engaged in milling rice and 100 are sawmills. The remainder are chiefly cotton spinning mills, oil mills for the extraction of oil from ground-nuts, and oil refineries connected with the petroleum industry. The average daily number of operatives rose from 63,066 in 1914 to 64,901 in 1915. The increase was chiefly in rice-mills. At the Census of 1911, 469,743 or only 6.6 of the total population were engaged outside agriculture and production.

As is the case in other parts of the Indian Empire, the imported and factory-made article is rapidly ousting the home-made and indigenous. But at Amarapura in the Mandalay District, a revival has taken place of hand silk-weaving. Burman wood-carving is still famous and many artists in silver still remain, the finish of whose

work is sometimes very fine. Bassein and Mandalay parasols are well known and much admired in Burma. But perhaps the most famous of all hand-made and indigenous industries is the lacquer work of Pagan with its delicate patterns in black, green and yellow traced on to a ground-work of red lacquer over bamboo. Lacquered articles ranging from those of the most exquisite finish to those of a coarse description are produced at Pagan on the Irrawaddy and are sold throughout the length and breadth of Burma.

### Trade.

The total value of the foreign trade in 1915-16 was only 2,572 lakhs, a decline of 4 per cent. compared with the previous year and of nearly 40 per cent. compared with the best year before the war. Imports amounted to 1,076 lakhs or 2 per cent. more than in the previous year. Rangoon, the only port with facilities for distribution, took 88.4 per cent. of the foreign trade and 83.3 of the Indian trade. Indian trade rose from 2,562 lakhs to 2,631 lakhs. The net customs duty was 130 lakhs or 4 per cent. less than in 1914-15. The shortage of shipping and the enormous cost of freight continued to hamper trade. Only articles of export required for war purposes such as oil, wolfram, lead and hides, show any marked increase. The export of the staple, rice, to foreign countries was less than half that in the year 1912-13.

The most important item of merchandise imported into Rangoon is manufactures of cotton, which account for 27 per cent. of the total import trade. These imports are valued at Rs. 290 lakhs. In 1915-16 the United Kingdom took 47 per cent. and the rest of the British Empire 21 per cent. of the total import and export trade of the province.

### Administration.

In 1897 the Province, which had formerly been administered by a Chief Commissioner, was raised to a Lieutenant-Governorship. The head of the Province is therefore now the Lieutenant-Governor. He has a Council of seventeen members, one of whom is elected by the Burma Chamber of Commerce, one by the Rangoon Trades Association and the remaining fifteen are nominated by the Lieutenant-Governor. Not more than seven members may be official; the rest must be non-officials and at least four must be selected from the Burmese population, one from the Indian and one from the Chinese community.

Burma is divided administratively into Upper Burma (including the Shan States and Chin Hills) and Lower Burma. The Shan States are administered by the Chiefs of the States, subject to the supervision of the Superintendents in the case of the Northern and Southern Shan States, and to the supervision of the Commissioners of the adjoining Divisions in the case of the other States. The Civil, Criminal and Revenue administration is vested in the Chief of the State, subject to the restrictions contained in the sanad. The law administered is the customary law of the State.

The Chin Hills are administered by a Superintendent.

Under the Lieutenant-Governor are eight Commissioners of divisions, four in Upper and four in Lower Burma. Commissioners in Upper Burma and the Commissioner of the Arakan Division are ex-officio Sessions Judges, but the other three Commissioners have been relieved of all judicial work.

Under the Commissioners are 40 Deputy Commissioners including the Police officers in charge of the Hill Districts of Arakan and the Salween District, who exercise the powers of Deputy Commissioner. Deputy Commissioners are also District Magistrates, Collectors, and Registrars, except in Rangoon, where there is both a District Magistrate and a Collector. Subordinate to the Deputy Commissioner are Assistant Commissioners. Extra Assistant Commissioners and township officers, called Myooks, in the villages are the village headmen, thugyls, assisted in Lower Burma by the Seelgaungs (rural policemen in charge of ten houses). The revenue administration is controlled by a Financial Commissioner assisted by two Secretaries. Subordinate Departments are in charge of a Commissioner of Settlements and Land Records, a Director of Agriculture, a Superintendent of the Civil Veterinary Department and a Registrar of Co-operative Credit Societies.

### Justice.

The administration of Civil and Criminal Justice is under the control of the Chief Court of Lower Burma with six judges (one temporary), and of the Judicial Commissioner, Upper Burma, with an Assistant Judicial Commissioner. There are seven Divisional and eight District Judges. There are also separate Provincial and Subordinate Judicial Services. Divisional Judges are also Sessions Judges. The Chief Court at Rangoon is the highest Civil Court of appeal and the highest court of Criminal appeal and revision in Lower Burma. It is also the High Court for the whole of Burma (including the Shan States) where European British subjects are concerned. It is the principal Civil and Criminal Court of original jurisdiction for Rangoon Town and hears appeals from all sentences of Courts and magistrates exercising jurisdiction in Rangoon Town.

In Criminal and Civil matters the Judicial Commissioner of Upper Burma exercises the power of a High Court for appeal, reference and revision, except in respect of criminal cases in which European British subjects are concerned.

All village headmen have limited Magisterial powers and a considerable number are also invested with civil jurisdiction to a limited extent.

### Municipalities.

The Rangoon Municipality is the most important, with an income of Rs. 43.53 lakhs and an expenditure of Rs. 43.98 lakhs. The Chairman is a member of the Indian Civil Service of Deputy Commissioner's rank. The members of the Committee are elected by wards.

There are 44 minor Municipalities, of which the most important are those at Mandalay and Moulmein. The average incidence of Municipal taxation is Rs 2-8-10.

### Local Funds.

No Local Boards or District Boards exist in Burma. In their place in Lower Burma there are District Cess Funds, derived mostly from a 10 per cent. cess on collections of ordinary local revenue and from collections from markets, ferries slaughter houses, etc. The total receipts amount to 85 lakhs.

In Upper Burma, there are District Funds. They are derived from market, ferry and license fees and occasional grants from Provincial revenues. The total revenue was 12.53 lakhs.

There are 7 Cantonment Funds, 19 Town Funds and, excluding the Rangoon Port Trust, 6 Port Funds.

### Finance.

As in the case of all other Provinces, the finances of Burma are based on a "Provincial Settlement." In the case of Burma, it came into force on the 1st April 1907, and the Government of India retains in the first place the entire profits of the commercial departments, such as Posts and Telegraphs, and in the second place, all the revenue where the 'locale' is no guide to its true incidence, such as the net receipts from Customs, Salt and Opium. But as the income from these sources is inadequate for the purpose of meeting the cost of the Imperial Services, special arrangements are made as with other Provinces for the division of the remaining sources of revenue between Imperial and Provincial Funds.

In 1910-1911, as a result of the Report of the Decentralisation Committee, modifications were introduced into the Settlement. Briefly, the Local Government retains 5-8ths of the net Land Revenue instead of a half, and the whole of the net Forest revenue. The following figures show the gross revenue and expenditure for 1914-15:—

	Receipts. Rs.	Expenditure. Rs.
Imperial ..	356.99 lakhs	77.56 lakhs
Provincial ..	550.21 "	508.32 "
District Funds ..	47.86 "	44.26 "
Municipalities ..	104.00 "	109.28 "
Other Funds ..	98.78 "	125.50 "

The Imperial Government makes a fixed annual assignment to the Burma Government. Under the settlement of 1911 this assignment was fixed at Rs. 12.90 lakhs. Including this sum contributions from Imperial Funds in the year 1914-15 amounted to Rs. 51.33 lakhs, as compared with Rs. 35.34 lakhs in the previous year. From 1914-15 onwards the Government of India has allotted an additional recurring grant of Rs. 15 lakhs to the province, and has further guaranteed to the province a minimum aggregate of revenue advancing by Rs. 8 lakhs annually until 1923-24. No payments under this guarantee will be made till after the war but it will have retrospective effect from the year 1911-12.

### Public Works.

This Department is administered by two Chief Engineers who are also Secretaries to Government in the Public Works Department. There are eight Superintending Engineers (including one for Irrigation and a Sanitary

Engineer), 53 Executive Engineers and Assistant Engineers. A Consulting Architect is attached to Head Quarters.

There are four Major Irrigation Works—Mandalay, Shwebo and Mon Canals and the Ye-U canal in the Shwebo District.

### Police.

The Police Force is divided into Civil, Military and Rangoon Town Police. The first two are under the control of the Inspector-General of Police, the latter is under the orders of the Commissioner of Police, Rangoon, an officer of the rank of Deputy Inspector-General.

There are four other Deputy Inspectors-General, one each for the Eastern and Western Range, one for the Railway and Criminal Investigation Department and one for the Military Police.

The sanctioned strength of the Civil Police Force at the end of March 1913 was 1,505 officers and 14,385 men, but the numbers fell 1,129 short of the sanctioned strength. The strength of the Military Police on the 1st January 1914 was 16,484 officers and men. The Rangoon Town Police stand at 84 officers and 1,242 men.

A special feature of Burma is the Military Police. Its officers are deputed from the Indian Army. The rank and file are recruited from natives of India with a few Kachins, Karens and Shans. An experiment is being made with the recruitment of Burmans. The organisation is Military, the force being divided into Battalions. The object of the force is to supplement the regular troops in Burma. Their duties, apart from their Military work, is to provide escorts for specie, prisoners, etc., and guards for Treasuries, Jails and Courts. The Military Police force has furnished many drafts of volunteers for active service at the front during the war.

### Education.

At the head is the Director of Public Instruction with an Assistant Director. There are 6 Inspectors of Schools belonging to the Imperial and one belonging to the Provincial Service, and 7 Assistant Inspectors belonging to the Provincial Service. The Rangoon College is staffed by a Principal and nine Professors drawn from the Imperial Service with three from the Provincial Service. Outside the Education Department is the Educational Syndicate, which holds certain examinations and serves as an advisory body on educational questions referred to it by Government. A system of Divisional Boards for the management of vernacular education has been sanctioned.

Pending the establishment of the Burma University at the end of the war, the Rangoon College and the Baptist College are affiliated to the Calcutta University. Under Government there are—

An Arts College, Law School, Reformatory School, School of Engineering, Apprentice School, High School for Europeans, High School at Taunggyi for the sons of Shan Chiefs, 5 Normal Schools, 15 Anglo-Vernacular High Schools, 18 Anglo-Vernacular Middle Schools, and 44 Vernacular Middle Schools.

A remarkable feature of education in Burma is the system of elementary education evolved,

generations ago, by the genius of the people. Nearly every village has a monastery (hpoongyi kyaung); every monastery is a village school and every Burman boy has, according to his religion, to attend that school, shaving his head and for the time wearing the yellow robe. At the hpoongyi-kyaungs the boys are taught to read and write and an elementary and native system of arithmetic. The result is that there are very few boys in Burma who are not able to read and write and the literacy of Burman men is 412 per mille.

Another feature of education in Burma is the excellent work of the American Baptist Mission, which has established schools in most of the important towns in Burma, as well as a College in Rangoon.

### Medical.

The control of the Medical Department is vested in an Inspector-General of Civil Hospitals. Under him are 41 Civil Surgeons. There is also a Sanitary Commissioner, two Deputy Sanitary Commissioners, an Inspector-General of Prisons, three whole time Superintendents of Prisons, a Chemical Examiner and Bacteriologist and a Superintendent of the Lunatic Asylum.

A Civil Surgeon is in charge of each District, while at the summer Head Quarters of Maymyo there is a special Civil Surgeon.

The total number of Hospitals and Dispensaries was 272 at the end of March 1915. The Rangoon General Hospital is perhaps the finest in the East.

The Pasteur Institute was opened in Rangoon in July 1915. The Director is a Senior Member of the Indian Medical Service.

The total number of patients treated in 1914 was 169,202.

### Administration.

Lieutenant-Governor, Sir Harcourt Butler K.C.S.I., C.I.E. Appointed 1915.

Private Secretary, Capt. F. L. Roberts, I.A.

Aide-de-Camp, C. J. Heath.

Honorary Aide-de-Camp, Lt.-Col. H. Des Voeux, C.I.E., I.A.

Indian Aides-de-Camp, Hony. Capt. Muzaffar Khan, Sardar Bahadur; Subadar-Major Amar Singh, Nair Bahadur.

### LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

#### Officials.

W. J. Keith.

Lt.-Col. E. C. Townsend.

H. Thompson.

Walter Francis Rice, C.S.I., I.C.S.

Charles M. Webb, I.C.S.

John Guy Rutledge.

C. H. Wollaston.

#### Non-Officials.

Merwanjee Cowasjee.

Lim Chin Tsang.

Sir Sao Mawng, C.I.E.

Mirza Abdul Hussein, Khan Bahadur.

Francis Foster Goodlife.

Maung Ba Tok.  
 Dr. San Crombie Po, M.D.  
 W. Macdonald.  
 J. E. Du Bern.

#### SECRETARIAT.

Chief Secretary, W. F. Rice, C.S.I.  
 Revenue Secretary, W. J. Keith.  
 Secretary, C. M. Webb.  
 Secretary, P.W.D., C. H. Wollaston.  
 Joint Secretary, P.W.D., H. E. W. Martindell.  
 Financial Commissioner, H. Thompson.  
 Officialising Senior Registrar, S. C. Buttery.

#### Miscellaneous Appointments.

Settlement Commissioner and Director of Land  
 Records, R. E. V. Arbuthnot.  
 Director of Agriculture, H. Clayton.  
 Consulting Architect, T. O. Foster, F.R.I.B.A.  
 Superintendent and Political Officer, Southern  
 Shan States, G. C. B. Stirling.  
 Superintendent and Political Officer, Northern  
 Shan States, H. A. Thornton.  
 Director of Public Instruction, J. G. Covernton.  
 Inspector-General of Police, Lt.-Col. H. Des  
 Vocux.  
 Chief Conservator of Forests, C. G. Rogers.  
 Inspector-General of Civil Hospitals, Col. A.O.  
 Evans.  
 Sanitary Commissioner, Lt.-Col. C. E. Williams.  
 Inspector-General of Prisons, Major H. H. G.  
 Knapp.

Commissioner of Excise, Major T. L. Ormiston.  
 Chief Customs Authority, Herbert Thompson.  
 Accountant-General, L. E. Pritchard, F. Dukoff  
 Gordon (Offg.)

#### Chief Commissioners of Burma.

Lieut.-Colonel A. P. Phayre, C.B.	..	1802
Colonel A. Fytche, C.S.I.	..	1867
Lieut.-Colonel R. D. Ardagh	..	1870
The Hon. Ashley Eden, C.S.I.	..	1871
A. R. Thompson, C.S.I.	..	1875
C. U. Aitchison, C.S.I.	..	1878
C. E. Bernard, C.S.I.	..	1880
C. H. T. Crosthwaite	..	1883
Sir C. E. Bernard, K.C.S.I.	..	1886
C. H. T. Crosthwaite, C.S.I.	..	1887
A. P. MacDonnell, C.S.I. (a)	..	1889
Alexander Mackenzie, C.S.I.	..	1890
D. M. Smeaton	..	1892
Sir F. W. R. Fryer, K.C.S.I.	..	1895
(a) Afterwards (by creation)	Baron	
MacDonnell.		

#### Lieutenant-Governors of Burma.

Sir F. W. R. Fryer, K.C.S.I.	..	1897
Sir H. S. Barnes, K.C.S.I., K.C.V.O.	..	1903
Sir H. T. White, K.C.I.E.	..	1905
Sir Harvey Adamson, Kt., K.C.S.I., LL.D.		1910
Sir Harcourt Butler, K.C.S.I., C.I.E.	..	1915

## Bihar and Orissa.

Bihar and Orissa lies between 19°-02' and 27°-30' N. latitude and between 82°-31' and 88°-26' E. longitude and includes the three provinces of Bihar, Orissa and Chota Nagpur, and is bounded on the north by Nepal and the Darjeeling district of Bengal; on the east by Bengal and the Bay of Bengal; on the south by the Bay of Bengal and Madras; and on the west by the United Provinces of Agra and Oudh and the Central Provinces.

The area of the British territories which constitute the Lieutenant-Governorship of Bihar and Orissa is 83,181 square miles inclusive of the area of large rivers. In addition to the districts which are directly under British rule, there are two groups of petty States which lie to the south and south-west of the Province and which under the names of the Tributary and Feudatory States of Orissa and the Political States of Chota Nagpur are governed each by its own Chief under the superintendence and with the advice of the Commissioner of the nearest British Administrative division assisted, in the case of the Orissa States, by a Political Agent. The area of these territories is 28,648 square miles and as it is usual to include them when speaking of Bihar and Orissa the area of the whole Province may be stated at 111,829 square miles. Two of the provinces of the Lieutenant-Governorship of Bihar and Orissa, *viz.*, Bihar and Orissa, consist of great river valleys, the third, Chota Nagpur, is a mountainous region which separates them from the Central Indian Plateau. Orissa embraces the rich deltas of the Mahanadi and the neighbouring rivers and is bounded by the Bay of Bengal on the south-east and walled in on the north-west by the hilly country of the Tributary States. Bihar lies on the north of the Province and comprises the valley of the Ganges from the spot where it issues from the territories of the Lieutenant-Governor of the United Provinces of Agra and Oudh till it enters Bengal near Rajmahal. Between Bihar and Orissa lies Chota Nagpur.

### The People.

The temporary head-quarters of Government are at Ranchi in Chota Nagpur, while the permanent Capital at Patna is nearing completion, the High Court and Government House being already occupied while the Secretariat building is almost complete. The Province has at present no hill station.

The Province has a population of 38,435,293 persons which is very little less than that of France and rather more than that of the Bombay Presidency. The province is almost entirely rural, no fewer than 966 per mille of the population living in villages. Even so with 344 persons per square mile, Bihar and Orissa is more thickly populated than Germany. There are only three towns which can be classed as cities, namely, Patna, Gaya and Bhagalpur. During the last thirty years the population of Patna, the capital designate, has been steadily diminishing. Hindus form an overwhelming majority of the population. Though the Muhamma-

dans form less than one-tenth of the total population they constitute more than one-fifth of urban population of the province. Animists account for 7 per cent. These are inhabitants of the Chota Nagpur plateau and the Santal Parganas, the latter district being a continuation of the plateau in a north-easterly direction.

### Industries. \*

The principal industry is agriculture, Bihar, more especially North Bihar, being the "Garden of India." Rice is the staple crop but the spring crops, wheat, barley, and the like are of considerable importance. It is estimated that the normal area cultivated with rice is 15,615,100 acres or 48 per cent. of the cropped area of the Province. Wheat is grown on 1,121,800 million acres, barley on 1,411,800 acres, maize or Indian-corn on 1,634,600 acres, the latter being an autumn crop. Oilseeds are an important crop, the cultivation having been stimulated by the demand for them in Europe. The exports in various kinds of oilseeds amounted in 1915-16 to 3,622,788 maunds valued at Rs. 1,68,96,484. It is estimated that 1,932,300 acres of land are annually cropped with oil-seeds in the Province. There is irrigation in Shahabad, Gaya, Champaran and Muzaffarpur districts in Bihar and in Balasore and Cuttack in Orissa. The Indigo industry had before the war been steadily on the decline, the total area sown having decreased from 342,000 acres in 1896 to 109,600 acres in 1911. The principal cause of this was the discovery of the possibilities of manufacturing synthetic or chemically prepared indigo on a commercial scale, a process chiefly carried out in Germany. Owing, however, to the stoppage of supplies from Germany the value of natural indigo has risen enormously and the area under cultivation has also risen. Jute is an important crop in some districts, especially Purnea, the area cultivated being 277,200 acres. All the districts of Bihar with the exception of Purnea, are liable to famine. The last serious famine was in 1895-96. In any year in which monsoon currents from either the Bay of Bengal or the Arabian Sea are unduly late in their arrival or cease abruptly before the middle of September the agricultural situation is very grave. It may be said that for Bihar the most important rainfall is that known as the *hauia*, due towards the end of September or up to middle of October. Rain at this time not only contributes materially to an increased outturn of the rice crop, but also provides the moisture necessary for starting the spring or *rabi* crops.

### Manufactures.

Opium was formerly, with indigo, the chief manufactured product of Bihar, but in consequence of the agreement with the Chinese Government the Patna Factory has been closed. At Monghyr the Peninsular Tobacco Company have erected one of the largest cigarette factories in the world and as a result tobacco is being grown much more extensively. There are two important iron works in the Singhbhum

\* The figures given in this paragraph relate to British territory only.

District. Messrs. Tata & Co.'s Iron and Steel Works at Sakchi and the Bengal Iron and Steel Company at Dhanbani. Both these works possess considerable economic possibilities and are likely to have a far reaching effect on the iron and steel trade of India in the future. The Cape Copper Co. are also opening up copper mines at the Rakha Hills in the same district. But by far the most important of the mineral industries in the province is that concerned in the raising of coal. The coalfields in the Manbhum District have undergone an extraordinary development in the past twenty years. The importance of the industry may be said to date from the opening of the railway from Barakar to Dhanbad and Katras in 1894. In 1894 the output of all the mines in the district was only 126,686 tons; in 1895 it rose to 1,281,294 tons, the enormous increase being almost entirely from the Jharia field. In the two succeeding years there was a set back, but from 1898 there was a steady rise in the output which first touched two million tons in 1901. In 1905 the output had swelled to nearly three million tons and in 1906 to nearly four millions; in 1907 over 5,800,000 tons were raised and in the following year no less than seven million tons. In 1914-15 the production of Indian coal had been raised to 16,464,000 tons valued at Rs. 588 lakhs. Of this total 56 per cent. was from the Jharia fields and 30 per cent. from the Raniganj coal fields of Bengal. The entrance of the Bengal-Nagpur Railway into the Jharia field in 1904, and the subsequent extension of various small loops and branches, and the innumerable sidings from both systems, the doubling of the line from Barakar to Dhanbad and the opening of the section of the Grand Trunk Road of the East Indian Railway from Dhanbad to Gomoh have all contributed to this rapid development. Gridhri in Hazaribagh is also a centre of a considerable coal-mining industry, and, as it does, mines owned and worked by the East Indian Railway Company. The Bokaro-Ramgarh field in the same district is likely to be of great economic importance as soon as the area is fully opened up by the railway now under construction. It immediately adjoins the Jharia field across the Hazaribagh order. There is a large undeveloped coal field, it is believed, in the Districts of Palamaner and Hazaribagh.

### Administration.

The Province is administered by a Lieutenant-Governor in Council. The Lieutenant-Governor is appointed by the Crown and is a senior member of the Indian Civil Service. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, while the third, in practice, is an Indian. Each member takes charge of certain departments and the event of any difference of opinion regarding inter-departmental references the matter is decided in Council. In practice all important cases are submitted through the member concerned to the Lieutenant-Governor.

The unit of executive administration is the District. The District Officer is styled District Magistrate and Collector, except in the Scheduled districts where he is known as the Deputy Commissioner. The ordinary district jails are placed in charge of a Superintendent, usually the Civil Surgeon, while the Magistrate pays periodic

visits of inspection. All District Officers are *ex-officio* Registrars; and as *ex-officio* Chairmen of the District Boards they have control over primary education and are charged with the execution and administration of all local public works. In a word, the District Officer is the executive chief and administrator of the tract of country committed to him. As District Magistrate he is also local head of the magistracy and, as such, competent to try all cases, except those more important which are sent for trial at the Sessions, but except in the Scheduled districts he seldom presides in Court, and his share in this part of the administration is practically confined to the distribution of work, the hearing of petty appeals and the general superintendence of his subordinates. The latter combine revenue with magisterial functions and as Deputy Collectors exercise under his control many of the powers of a Collector. The police, by whose aid he carries on the criminal administration, have as their local superior a Superintendent, who in all matters, except those concerning the discipline and internal economy of the force, has to carry out such instructions as he receives from the District Magistrate. The Sub-divisional Officers, who are Joint, Assistant and Deputy Magistrates in charge of portions of districts, occupy, to a great extent, in their own jurisdictions, the position of the District Officer, except in respect of the police, over whom they have only judicial and no executive control. There are 21 Districts.

Above the District Magistrates are the Divisional Commissioners. Their duties are principally those of supervision. In almost all matters they exercise a general superintendence, and especially in the Revenue Department they control the Collectors' proceedings. Commissioners are the channels of communication between the local officers and Government, sifting, collating and bringing together in a compact form the information they receive. In revenue cases the Commissioner forms a Court of appeal and in this and similar matters is subject to the orders of the Board of Revenue. With this exception he is in subordination to Government direct.

The Civil Secretariat consists of the Chief Secretary, who is in charge of the Political, Appointment and Education Departments; the Revenue and Judicial Secretary, the Financial and Municipal Secretary and their three Under Secretaries.

### Finance.

The Province of Bihar and Orissa was formed with five divisions, detached from the old province of Bengal with effect from the 1st April 1912. The old arrangements made with the Government of Bengal regarding the financial administration of the Province therefore ceased to apply from that date. A fresh arrangement has, however, been made, with the approval of the Secretary of State. As the method adopted was in some measure tentative and provisional, a temporary settlement for a period of three years only has been effected. Owing to the war it has been found necessary to continue the provisional settlement for the present. Under the terms of this settlement the whole of the receipts under the heads of Interest,



Forest, Registration, Courts of Law, Jails, Police, Ports and Pilotage, Education, Medical, and superannuation receipts have been made over entirely to the local Government together with their corresponding charges. In addition to these, it receives three-fourths of the receipts from excise, the whole of the Land Revenue collected from Government Estates, one-half of the receipts under all other sub-heads excepting recoveries from zamindars and raiyats on account of survey and settlement in Bihar and other similar special surveys and the whole of the receipts under Scientific and other Minor Departments.

The only expanding items of revenue are Excise and Stamps. The Provincial Budget for 1916-17 shows an opening balance of Rs. 1,35,48,000, Receipts Rs. 3,02,63,000, Expenditure Rs. 3,25,71,000 and the closing balance Rs. 4,38,16,000.

#### Public Works.

The Public Works Department in the Province of Bihar and Orissa consists of two branches, viz:—(1) Roads and Buildings, and (2) Irrigation and Marine, which also deals with railways. Each branch has a Chief Engineer, who is also Secretary to the Local Government with an Engineer Officer as Under Secretary under him. There is also a non-professional Assistant Secretary, a Consulting Architect and a Sanitary Engineer, who works under a Sanitary Board. The electrical work of the Province is carried out by an Electrical Inspector and a staff of subordinates.

The Roads and Buildings Branch consists of two Circles in charge of two Superintending Engineers who control the Public Works Divisions held by the Executive Engineers for the execution of Imperial and Provincial works. The Superintending Engineers are also the Inspectors of Works under the Local Self-Government Act in respect of all local works of the District Boards and, in this capacity, are the professional advisers of the Chairman and of the Divisional Commissioners who control the operation of the Boards. They also supervise all works carried out by the District Boards.

The Irrigation branch is composed of three Circles, each of which is in charge of a Superintending Engineer. In the Irrigation Circles, the Executive Engineers carry out the works of the Roads and Buildings Branch, within the limits of their divisions, in addition to their irrigation duties. The Superintending Engineers of Irrigation Circles also act as Inspectors of Works in regard to local works in the districts in their Circles. In the Sone and Orissa Circles there are two Revenue Divisions under Deputy Collectors who deal with the assessment and collection of waterrates on the Orissa and Sone Canals under the control of the Superintending Engineers.

#### Justice.

The administration of justice is controlled by the High Court of Judicature recently established at Patna. In the administration of civil justice below the High Court are the District Judges as Courts of Appeal, the Subordinate Judges and the Munsiffs. The jurisdiction of a District Judge or Subordinate Judge extends to all original suits cognizable by the Civil Courts. It does not, however, include the powers of a Small Cause

Court, unless these be specially conferred. The ordinary jurisdiction of a Munsif extends to all suits in which the amount or value of the subject matter in dispute does not exceed Rs. 1,000 though the limit may be extended to Rs. 2,000. On the criminal side the Sessions Judge hears appeals from Magistrates exercising first class powers while the District Magistrate is the appellate authority for Magistrates exercising second and third class powers. The District Magistrate can also be, though in point of fact he very rarely is, a court of first instance. It is usual in most districts for a Joint Magistrate or a Deputy Magistrate to receive complaints and police reports, cases of difficulty or importance being referred to the District Magistrate who is responsible for the peace of the district. In the non-regulation districts the Deputy Commissioner and his subordinates exercise civil powers and hear rent suits.

#### Local Self-Government.

Bengal Act III of 1884, which regulates the constitution, powers and proceedings of Municipal bodies in this Province has been amended by the Bengal Acts IV of 1894 and II of 1896. By these enactments the elective franchise has been further extended, and now provides for the establishment and maintenance of veterinary institutions and the training of the requisite staff, the improvement of breeds of cattle, the training and employment of female medical practitioners, the promotion of physical culture, and the establishment and maintenance of free libraries. The Commissioners may order a survey and organise a fire brigade, they may control the water-supply when its purity is suspected, even to the extent of interference with private rights, larger powers of precaution are conferred in the case of ruined and dangerous houses and other erections, as well as increased optional powers for the general regulation of new buildings. It is proposed to introduce shortly in the Provincial Legislative Council a new Municipal Bill, which will supersede the Bengal Acts, which are now out of date in several particulars.

The total number of Municipalities at present in existence is 55. The ratepayers of 49 Municipalities have been granted the privilege of electing two-thirds of the number of Commissioners fixed in each case, whilst in 34 cases the Commissioners are authorised to elect their own Chairman. In the remaining towns Government has reserved to itself the power of appointing the Commissioners or Chairman, as the case may be, owing either to the backwardness of the place or to the necessity for holding the balance against contending interests or strong party feeling. It is only in 4 towns, however, that Government exercises complete control in the appointment of both Commissioners and Chairman.

Apart from Municipalities, each district with the exception of the Santal Parganas, Angul and Singhbhum has a District Board constituted under Bengal Act III of 1885. Municipal areas are excluded in accordance with the provisions of section 1. Local Boards have been formed in all of these districts where there are sub-divisions, except in Champaran and Ranchi. There are at present 18 District Boards, 41 Local Boards, and 23 Union Committees in the Province.

In accordance with the provisions of section of the Act, a District Board is to consist of not more than 9 members. Local Boards are entitled to elect such proportion (as a rule one-half) of the whole of the District Board as the Lieutenant-Governor may direct. In districts where there are no Local Boards, the whole of the members are appointed by Government. The Chairman of the District Board is appointed by Government; he is in practice always the Magistrate of the district.

### Land Tenures.

Estates in the Province of Bihar and Orissa are of three kinds, namely, those permanently settled from 1793 which are to be found in the Patna, Tirhut and Bhagalpur divisions, those temporarily settled as in Chota Nagpur and parts of Orissa, and estates held direct by Government as proprietor or managed by the Court of Wards. The passing of the Bengal Tenancy Act (VIII of 1885) safeguarded the rights of the cultivators under the Permanent Settlement Act. Further, the Settlement Department under the supervision of the Director of Land Records makes periodical survey and settlement operations in the various districts, both permanently and temporarily settled. In the former, the rights of the under tenants are recorded and attested, while in the latter there is the re-settlement of rents. In the re-settlement proceedings, the rents are fixed not only for the landlords but also for all the tenants. A settlement can be ordered by Government on application made by raiyats.

The tenures of Orissa are somewhat different. Under the zamindars, that is, the proprietors who took settlement from Government and pay revenue to Government direct, is a class of subordinate proprietors or proprietary tenure holders, who were originally village headmen, holding more or less direct with the revenue authorities. They have a variety of names, such as *mukadam*, *padhan*, *maurusi*, *sarbarakar*, *raoti*, *khariddar* and *shikmi* zamindar. These sub-proprietors or proprietary tenure holders pay their revenue through the zamindars of the estates within which their lands lie. In Chota Nagpur, Orissa and the Santal Parganas, the rights of village headmen have been recognised. The headman collects the rents and is responsible for them minus a deduction in remuneration for his trouble.

### Police.

The Departments of Police, Prisons and Registration are each under the general direction of Government, supervised and inspected by an Inspector-General with a staff of assistants. The Commissioner of Excise and Salt is also Inspector General of Registration.

Under the Inspector-General of Police are five Deputy Inspectors-General and 27 Superintendents. There are also 27 Assistant Superintendents of Police and 15 Deputy Superintendents. The force is divided into the District Police, the Railway Police and the Military Police. A Criminal Investigation Department has also been formed for the collection and distribution of information relating to professional criminals and criminal tribes whose

operations extend beyond a single district and to control, advise, and assist in investigations of crime of this class and other serious cases in which its assistance may be invoked. There are two companies of Military Police which are maintained as reserves to deal with serious and organised disturbances and perform no ordinary civil duties. The work of the Railway Police is practically confined to offences actually committed on the railways, but they are under the control of the Deputy Inspector-General of the Criminal Investigation Department, and an important part of their duties is to co-operate with the District Police in watching the movements of bad characters by rail. The prevention and detection of crime in the Province generally is entrusted to the District Police. In that work they are assisted by the rural police, known as *chaukidars* and *dadadars*, who form no part of the regular force, but are under a statutory obligation to report all cognizable crime at the police station, and generally to assist in the prevention and detection of crime. They are not whole-time servants of Government, but they are paid a small monthly salary which is realized from the villagers by the panchayat. The cost of the police in 1914-15 was Rs. 47,23,000.

### Education. \*

The Department of Public Instruction is controlled by a Director. There are 6 Divisional Inspectors of Schools, of whom one inspects European Schools in addition to his other duties, 5 Assistant Inspectors, 5 Special Officers for Muhammadan Education, 26 Deputy Inspectors, 194 Sub-Inspectors, 80 Assistant Sub-Inspectors and 158 Inspecting Pandits.

There is as yet no University in the Province but a Bill to establish one at Patna has recently been introduced into the Imperial Council. There are 7 Arts Colleges with 2,415 students and one Training College for 32 students, which with the Patna College, the Ravenshaw College at Cuttack and the Greer Bhumihar Brahman College at Muzaffarpur is maintained by Government. The College at Bhagalpur, the Bihar National College at Bankipore and the Dublin University Mission College at Hazaribagh are aided by Government. There are 97 High Schools, 94 for boys and 3 for girls with 82,302 and 325 pupils, respectively. Of these the most important are the Zila Schools, maintained by Government at the headquarters of each district, and the Government Schools for girls at Cuttack and Bankipore, but 44 schools for boys and 1 for girls also receive aid from provincial revenues. Most of the schools of status lower than High Schools are managed by local bodies such as District Boards. Among these are 234 Middle English Schools with 23,625 pupils, 135 Middle Vernacular Schools with 11,936 pupils, and 23,402 Primary Schools with 6,43,117 pupils. Of the primary schools 17,876 are maintained or aided by public funds. For training vernacular teachers there are 5 first grade training schools, 107 smaller schools for training *gurus* or village school masters and 7 training schools for mistresses. Other special institutions include 36 technical and industrial schools, 4 commercial schools and 15 *Madrasas* where Persian and

\* The figures given in this paragraph relate to British territory only.

Arabic are the chief subjects of study. The expenditure on public instruction from provincial funds in 1914-15 was Rs. 36,72,000 and from District and Municipal funds Rs. 15,22,000.

### Medical.

The Medical Department is under the control of the Inspector-General of Civil Hospitals who is a Member of the Indian Medical Service. Under him there are 20 Civil Surgeons who are responsible for the medical work of the districts at the head-quarters of which they are stationed. 57 Dispensaries are maintained by Government—

Public	..	..	..	19
Special Police	..	..	..	24
Canal	..	..	..	5
Others	..	..	..	9
Total				57

Besides these there are 309 Dispensaries maintained by Local bodies, Railways, private persons, etc. 3,182,293 patients including 41,959 in-patients in public dispensaries were treated in 1915. There is one Lunatic Asylum and 8 Institutions for the treatment of lepers.

The Sanitary Department is in charge of the Sanitary Commissioner who is directly subordinate to Government as its expert adviser in regard to sanitation. There are three Deputy Sanitary Commissioners who work under the control of the Sanitary Commissioner. Vaccination is carried out by a staff under the direction of the Sanitary Commissioner. There is also a Sanitary Engineer.

### Administration.

*Lieutenant-Governor*, Sir Edward Gait, K.C.S.I., C.I.E. Assumed charge of office, 19th November 1915.

#### PERSONAL STAFF.

*Private Secretary*, J. C. B. Drake, I.C.S.  
*Aide-de-Camp*, D. B. Cumming, Indian Police  
*Honorary Aides-de-Camp*, Hon. Capt. Sardar Bahadur Hira Singh, Subadar Major Sita Ram Singh, Lieut.-Col. V. N. Hickley, V.D. Major A. T. Peppe.

#### EXECUTIVE COUNCIL.

E. V. Levinge, C.S.I. Took his seat, 1st August 1912.

Maharaja Bahadur Sir Rameswar Singh, K.C.I.E. of Darbhanga. Took his seat, 1st August 1912.

Sir William Vincent, Kt. (Hon. Mr. W. Maude, C.S.I., designate.)

#### LEGISLATIVE COUNCIL.

*President*, The Lieutenant-Governor.

*Vice-President*, E. V. Levinge, C.S.I.

#### Ex-Officio.

The Members of the Executive Council.

#### NOMINATED.

##### Officials.

Ashar-ud-din Ahmad.  
 J. G. Jennings.  
 L. C. Adami.

H. J. McIntosh, I.C.S.

R. H. C. Walsh

Blanchard Foley.

H. Coupland

F. Clayton.

E. G. Stanley.

H. K. Briscoe, I.C.S.

E. L. Hammond.

R. T. Dundas.

L. F. Morshed.

Col. G. J. Hamilton B.-II.

#### Non-Officials.

Maharaja Bahadur Sir Ravanswar Prasad Singh, K.C.I.E.

Raj Bahadur Nishi Kanta Sen,

Madhu Sudan Das, C.I.E.

Rev. A. Campbell, D.D.

#### ELECTED.

Raja Harihar Parshad Narayan Singh.

Babu Maheshwar Prasad.

Kirtyanand Singh.

Babu Ganesh Lal Pandit.

Kumar Thakural G. Prasad Singh.

W. A. Ironside.

D. J. Reed.

Moulvi Salyid Nurul Hasan.

Salyid Ahmad Husain.

Salyid Muhammad Nam.

Khawja Muhammad Nur.

Bishun Prasad.

Dwarka Nath Raj Bahadur.

Lacmi Prasad Sinha.

Braja Sundar Das.

Sharat Chandra Sen.

Purnendu Narayan Singh.

Adit Prasad Singh.

Kumar Sheonandan Prasad Singh.

Babu Gopabandhu Das.

Shyam Krishna Sahay.

#### SECRETARIAT.

*Chief Secretary to Government*, Political, Appointment, and Educational Department, H. McPherson.

*Secretary to Government*, Financial and Municipal Departments, E. L. Hammond.

*Secretary to Government*, Revenue Department H. Coupland.

*Secretaries to Government* (P. W. D.), Irrigation Branch, F. Clayton.

*Buildings and Roads Branch*, E. G. Stanley.

#### BOARD OF REVENUE.

*Member*, W. Maude.

#### MISCELLANEOUS APPOINTMENTS.

*Director of Public Instruction*, J. G. Jennings, M.A.

*Inspector-General of Police*, R. T. Dundas.

*Conservator of Forests*, H. H. Haines.

*Inspector-General of Civil Hospitals*, Col. G. J. H. B.-II.

*Sanitary Commissioner*, Lt.-Col. E. C. Hare, I.M.S.

*Inspector-General of Prisons*, Lt.-Col. Bawa Jivan Singh.

*Accountant-General*, Upendralal Mazumdar, M.A.

*Director of Agriculture*.—G. Milne.

*Officiating Director of Agriculture*, J. B. Dain, B.A.

## The Central Provinces and Berar.

The Central Provinces and Berar compose a great triangle of country midway between Bombay and Bengal. Their area is 130,991 miles, of which 82,000 are British territory proper and the remainder held by Feudatory Chiefs. The population (1911) is 13,916,308 under British administration and 2,117,002 in the Feudatory States. Various parts of the Central Provinces passed under British control at different times in the wars and tumult in the first half of the 19th century and the several parts were amalgamated after the Mutiny, in 1861, into the Chief Commissionership of the Central Provinces. Berar was, in 1853, assigned to the East India Company as part of a financial arrangement with the Nizam and was transferred to the Central Provinces in 1903, as the result of a fresh agreement with the Nizam.

### The Country.

The Central Provinces may roughly be divided into three tracts of upland, with two intervening ones of plain country. In the north-west, the Vindhyan plateau is broken country, covered with poor and stunted forest. Below its precipitous southern slopes stretches the rich wheat growing country of the Nerbada valley. Then comes the high Satpura plateau, characterised by forest-covered hills and deep water-cut ravines. Its hills decline into the Nagpur plain, whose broad stretches of shallow black cotton soil make it one of the more important cotton tracts of India and the wealthiest part of the C. P. The Eastern half of the plain lies in the valley of the Wainganga and is mainly a rice growing country. Its numerous irrigation tanks have given it the name of the "lake country" of Nagpur. Further east is the far-reaching rice country of Chattisgarh, in the Mahanadi basin. The south-east of the C. P. is again mountainous, containing 24,000 square miles of forest and precipitous ravines, and mostly inhabited by jungle tribes. The Feudatory States of Bastar and Kankar lie in this region. Berar lies to the south-west of the C. P. and its chief characteristic is its rich black cotton-soil plains.

### The People.

The population of the province is a comparatively new community. Before the advent of the Aryans, the whole of it was peopled by the Gonds and these aboriginal inhabitants fared better from the Aryans than their like in most parts of India because of the rugged nature of their home. But successive waves of immigration flowed into the province from all sides. The early inhabitants were driven into the inaccessible forests and hills, where they now constituted a large portion of the tribes in those parts, who form a quarter of the whole population of the C. P. The Gonds are still found in large numbers in all parts of the province, but they are partially concentrated in the south-east. The main divisions of the new comers are indicated by the language divisions of the province. Hindi, brought in by the Hindustani-speaking peoples of the North, prevails in the North and East; Marathi in

Berar and the west and centre of the C. P. Hindi is spoken by 56 per cent. of the population and is the *lingua franca*. Marathi by 31 per cent. and in Berar, and Gond by 7 per cent. The effects of invasion are curiously illustrated in Berar, where numbers of Moslems have Hindu names, being descendants of former Hindu officials who on the Mahomedan invasion adopted Islam rather than lose their positions. The recent census shows that a gradual Brahmanising of the aboriginal tribes is going on. The tribes are not regarded as impure by the Hindus and the process of absorption is more or less civilising.

### Industries.

When Sir Richard Temple became first Chief Commissioner of the C. P. the province was land-locked. The only road was that leading from Jubbulpore to Nagpur. The British administration has made roads in all directions, the two trunk railways between Bombay and Calcutta run across the province and in the last few years a great impetus has been given to the construction of subsidiary lines. These developments have caused a steady growth of trade and have aroused vigorous progress in every department of life. The prime industry is, of course, agriculture, which is assisted by one of the most admirable agricultural departments in India and is now receiving additional strength by a phenomenal growth of the co-operative credit movement. The land tenure is chiefly on the *zindari*, or great land-lord, system, ranging, with numerous variations, from the great Feudatory chieftains, which are on this basis, to holdings of small dimensions. A system of land legislation has gradually been built up to protect the individual cultivator. Berar is settled on the Bombay ryotwari system. Thirty-eight per cent. or about 44,000 square miles of the C. P. is forest: in Berar the forest area is 3,941 square miles. The rugged nature of the greater part of the country makes forest conservation difficult and costly. Excluding forest and wastes, 57 per cent. of the total land is occupied for cultivation; in the most advanced districts the proportion is 80 per cent.; and in Berar the figure is also high. The cultivated area is extending continuously except for the temporary checks caused by bad seasons. Rice is the most important crop of the C. P., covering a quarter of the cropped area. Wheat comes next, with 15½ per cent., then pulses and cereals used for food and oil seeds, with 11 per cent. and cotton with 7 per cent. In Berar cotton occupies nearly 40 per cent. of the cropped area, jowar covers an equal extent, then wheat and oil seeds. In agriculture more than half the working population is female.

### Commerce and Manufactures.

Industrial life is only in its earliest development except in one or two centres, where the introduction of modern enterprise along the railway routes has laid the foundations for great future developments of the natural wealth of the province. Nagpur is the chief centre of

a busy cotton spinning industry. The Empress Mills, owned by Parsi manufacturers, were opened there in 1877 and the general prosperity of the cotton trade has led to the addition of many mills here and in other parts of the province. The total output of spun yarn now amounts to approximately 60 million yards a year.

The largest numbers engaged in any of the modern industrial concerns are employed in manganese mining. Then follow coal mining, the Jabulpore marble quarries and allied works the limestone quarries, and the mines for pottery clay, soapstone, &c.

The total number of factories of all kinds legally so described was 450 in 1915, the latest period for which returns are available and the number of people employed in them 48,846. The same economic influences which are operative in every progressive country during its transition stage are at work in the C. P. and Berar, gradually sapping the strength of the old village industries, as communications improve, and concentrating industries in the towns. While the village industries are fading away, a large development of trade has taken place. The last pre-war reports showed an increase in volume by one-third in eight years. In 1914 for the first time, statistics for the Berar factories were incorporated with those of the C. P.

#### Administration.

The administration of the Central Provinces and Berar is conducted by a Chief Commissioner, who is the controlling revenue and executive authority and is appointed by the Governor-General-in-Council. He is assisted by three secretaries, two under-secretaries and an assistant secretary. Simultaneously with the jubilee of the foundation of the Province in 1913 a Legislative Council was constituted. It consists of 24 members, excluding the Chief Commissioner, 7 being elected by municipalities, District Councils and Landholders in the C. P. and 17 nominated by the Chief Commissioner, of whom not more than 10 may be officials and 3 shall be non-officials chosen respectively by the municipalities, District Boards and Landholders of Berar. The Chief Commissioner may nominate an additional member, official or non-official, who has special knowledge of a subject on which legislation is pending. The C. P. are divided for administrative purposes into four divisions, and Berar constitutes another division. Each of these is controlled by a Commissioner. Berar is divided into six districts, three other divisions into three districts each and one into three, and these are controlled by Deputy-Commissioners, immediately subordinate to the Commissioners. The principal heads of Provincial departments are the Commissioner of Settlements and Land Records, the Inspector-General of Civil Hospitals and Sanitary Commissioners, the Inspector-General of Police, the Inspector-General of Prisons, the Director of Public Instruction, the Commissioner of Excise and Miscellaneous Revenue, and the Director of Agriculture and Industries. The Deputy-Commissioners of districts are the chief revenue authorities and District Magistrates, and they exercise the usual powers and functions of a district officer. The forests

are managed by a forest officer, usually a member of the Imperial Forest Service, over whom the Deputy-Commissioner has certain powers of supervision, particularly in matters affecting the welfare of the people. Each district has a Civil Surgeon, who is generally also Superintendent of the District Jail and whose work is also in various respects supervised by the Deputy-Commissioner. The Deputy-Commissioner is also marriage registrar and manages the estates of his district which are under the Court of Wards. In his revenue and criminal work the Deputy-Commissioner is assisted by (a) one or more Assistant Commissioners, or members of the Indian Civil Service; (b) one or more Extra-Assistant Commissioners, or members of the Provincial Civil Service, usually natives of India, but including a few Europeans and Eurasians; and (c) by tahsildars and naib-tahsildars, or members of the Subordinate service, who are nearly always natives of India. The district is divided for administrative purposes into tahsils, the average area of which is 1,500 square miles. In each village a sam-bardar, or representative of the proprietary body, is executive headman.

#### Justice.

The Judicial Commissioner is the highest court of civil appeal, and except in cases against European British subjects, in which the High Court of Bombay has jurisdiction, is the highest court of criminal appeal. He is assisted by an Additional Judicial Commissioner for the Central Provinces and another for Berar. The administration of criminal justice was formerly entirely in the hands of Commissioners and the District staff, but Commissioners have now no criminal powers as such and their place as Sessions Judges has been taken by Divisional Judges. By the Civil Courts Act of 1904, the civil has finally been separated from the executive department. The civil staff consists of Divisional Judges, District Judges, Subordinate Judges and Munsifs.

#### Local Government.

Municipal administration was first introduced under the Punjab Municipal Acts and the Municipality of Nagpur dates from 1864. Several revising Acts extend its scope. Viewed generally, municipal self-government is considered to have taken root successfully. The general basis of the scheme is the Local Board for each tahsil and the District Council for each district. In Berar these bodies are called Taluk Boards and District Boards. The larger towns have municipalities. A certain proportion of the Local Board members are village headmen, elected by their own class, others are elected representatives of the mercantile and trading classes and a third proportion, not exceeding  $\frac{1}{3}$  of the whole, are nominated by Government. The constitution of the District Councils is similar. The officers of the District Councils are frequently non-officials, but it is generally found convenient that the Tahsildar and Naib Tahsildar should be Chairman and Secretary of the Local Boards. The District Councils have no power of taxation and Local Boards derive their funds in allotments from the District Councils. Rural education and sanitation are among the primary objects to

which these bodies direct their attention and expenditure on famine relief is in the first instance a charge upon the District Council funds.

### Finance.

The main sources of Government income in the province has always been the land revenue, but under Maharratta rule many petty imposts were added in all branches of trade and industry and life in general. Thus there was a special tax on the marriage of Banias and a tax of a fourth of the proceeds of the sale of houses. The scheme of Provincial finance was introduced in 1871-72. Special settlements under this system have been necessitated in view of the special circumstances of the province and the recurrence of famine, which a few years ago caused a severe economic strain upon the province. The wave of prosperity which has spread over the country in the past 14 years, since the end of the previous period, has more than trebled the funds available for the administration, compared with what they were before the several years of scarcity, and the progress of the administration and of expenditure has increased correspondingly, without any increase of taxation under provincial heads.

### Public Works.

The Public Works Department is controlled by a Chief Engineer, who is also Secretary to the Chief Commissioner. There are two Superintending Engineers for roads and buildings and a third in charge of irrigation. In 1892 a separate division of the Public Works Department was formed for the construction of roads and buildings in the Feudatory States. The expansion of the department and its work has been one of the most remarkable features of the administration in the past decade and a half, largely owing to the demands of a progressive age in regard to communications and new buildings. The Irrigation Branch of the P. W. D. represents a completely new departure. It was formerly the accepted view that the irregular surface of the country would make irrigation canals impossible and that the S. W. monsoon was so regular that it would pay better to relieve famine than to prevent it. Both conclusions have been reversed. Picked officers investigated projects for irrigation when the Irrigation Commission was appointed (1901) and canal and storage works have since been advanced with vigour. The Tandula, Wainganga and Mahanadi canal projects are amongst the more important schemes.

### Police.

The police force was constituted in its present basis on the formation of the province, the whole of which, including the Municipalities, is under one force. The strength is equal to one man per 9 square miles of area. The superior officers comprise an Inspector-General, whose jurisdiction extends over Berar, Deputy Inspectors-General, in charge of the Eastern and Western ranges and of the Criminal Investigation Department, and the usual cadre of District Superintendents, Assistant and Deputy Superintendents, and subordinate officers. On three railways special railway police are employed and on others the Provincial force. A Special Reserve of 290 men is distributed over the head-quarters of six districts, for use in dealing with armed disturbers of the peace

in whatever quarter they may appear. The men in this reserve are regularly drilled and armed with rifles. There is a small force of Mounted Police. The Central Provinces have no village police as the term is understood in some other parts of India. The village watchman is the subordinate of the village headman and not a police official and it is considered very desirable to maintain his position in this respect.

### Education.

The educational department was constituted in 1862 and the scheme then drawn up has remained the basis of the system of public education to the present day. The leading principles are that the department should content itself with the direct management of colleges and higher secondary schools, the training of teachers and inspection in work in rural areas. The maintenance of rural schools should as far as possible be left to the local authorities, every encouragement should be given to private philanthropy and no Government schools should be founded where there existed a sufficient number of institutions capable, with the assistance of the State, of supplying the local demand for instruction. At the head of the Department is the Director of Public Instruction, who has a staff of Inspectors and an Inspector for girls' schools. The Educational Service includes these appointments, except the last. An Agency Inspector supervises the schools of the Feudatory States. The province has three colleges: a Government College at Jubbulpore, and the Morris and Hislop Colleges at Nagpur. The Agricultural Department maintains an Agricultural College at Nagpur. The Colleges are affiliated to Allahabad University, but a demand has arisen for a local University.

After much preliminary discussion, a committee was appointed in July, 1914, to frame a scheme "which shall provide for a University of the teaching type at Nagpur, or in its immediate neighbourhood, and for the affiliation to this central institution of colleges situated in other places in the C. P. and Berar." The committee in their report, issued in 1915, proposed a University presenting some of the features of an affiliating University but possessed of functions and endowed with responsibilities which transcend the scope of those universities in India which conform to that type. "For (says the report) it will not only be an examining but a teaching university, and its teaching activities will not be limited to the provision of courses of instruction for postgraduate degrees, but will embrace several departments of study in the lower courses. The main difference, however, between the university which we propose and existing universities will lie in the closer relations of the former with its constituent colleges. According to our scheme, the University will exercise an effective control over the teaching and discipline of all the institutions which come within its jurisdiction. For it is only by exercising control over its component parts that the Universities can maintain a high standard of moral and intellectual endeavour, and create traditions which will make themselves felt in the development of the Provinces as a whole."

The committee said: "The University which we propose will possess powers which will entitle it to a high place in the administrative machinery of the Provinces. But administrative autonomy involves a certain measure of financial independence, and we have made proposals accordingly. It is true that the University will be mainly dependent on the Government for financial support. Apart from fees, the University at first at any rate, will have no resources of its own. But we confess to a desire to see it vested with financial control over the grant which it receives from Government as well as over its other receipts. If we may be permitted to employ a simile, the Government should regard the University as a business concern, of which it is a shareholder with a seat on the Board of Directors rather than as a servant to whom it makes certain payments, the disposal of which must be checked frequently and in detail.

"We recommend that the administration of the University be vested in a Chancellor, Vice-Chancellor, Senate and Syndicate. The Chief Commissioner of the Province will be the Chancellor. The Vice-Chancellor will be an honorary officer nominated by the Chancellor. The Senate will be the supreme authority, subject to the general control of the Government. It will be a body of 75 members, consisting partly of representatives of Government and of the general public, partly of elected representatives of the graduates and partly of teachers of the University and the constituent colleges, the latter being nominated by the Chancellor. The Syndicate will be the executive of the University, and will consist of the Vice-Chancellor, the Director of Public Instruction, a member of the Senate nominated by the Chancellor, four Principals of colleges, the Deans of the Faculties, and three members elected by the Senate from among their own number, of whom not more than one shall be a member of the teaching staff. The Chancellor's nominee on the Syndicate should be a person possessed of general administrative experience. In both these bodies the members of the teaching staff will predominate.

"After careful consideration, we have arrived at the conclusion that a university possessing the wide administrative and educational powers which we propose must be governed by a body in which professional and expert opinion will predominate. This we think we have secured by giving the members of the teaching staff a predominant voice in the councils of the University.

"We recommend that the University shall contain, at its inception, Faculties of Arts, Law and Science, and a department for the training of teachers subordinate to the Faculty of Arts. We have considered the question of establishing a Faculty of Agriculture. But in view of the necessity which the Government Department of Agriculture feels of pursuing a tentative policy for some years to come with regard to agricultural education, we feel that it would be inadvisable at the present juncture to suggest that the University should make provision for instruction in this branch knowledge. As to the Medical and Engineering

Schools, they are designed to meet certain special needs, and do not aim at providing courses of a university standard. It will be many years before the demand for higher courses will justify the establishment of Faculties in Medicine and Engineering."

Until recent years, the demand for education, primary or secondary, was satisfied by a few institutions in the larger towns, while in the whole of the rural districts primary education had to be pressed on an apathetic and even obstructive agricultural population. The new spirit of progress in recent years has quickened the public pulse and the efforts of Government to effect improved facilities have responded accordingly. Special grants from the Government of India budget surpluses in recent years have largely been devoted to assisting the District Councils to overtake their arrears of primary school building. District Councils in general have allowed their zeal for education to carry them into programmes of development beyond their means.

### Medical.

The medical and sanitary services of the province are respectively controlled by an Inspector-General of Civil Hospitals and a Sanitary Commissioner, the latter being assisted by a Sanitary Engineer. The medical department has progressed along comparatively stereotyped lines. A striking advance has been made in recent years with urban sanitation. The principal medical institutions are the Mayo Memorial Hospital at Nagpur, opened in 1874, with accommodation for 80 in-patients; the Victoria Hospital at Jubbulpore, opened in 1886 and accommodating 64 in-patients; the Lady Dufferin Hospitals at Nagpur and Raipur and the Lady Elgin Hospital at Jubbulpore, these last three being for women and containing together accommodation for 64 in-patients. The province has two lunatic asylums, at Nagpur and Jubbulpore respectively. Vaccination is compulsory in some Municipal towns to which the Vaccination Act has been extended. The administration in 1913 sanctioned the opening of peripatetic dispensaries in unhealthy areas.

### Administration.

Chief Commissioner, Sir B. Robertson, K.C.S.I., C.I.E., apptd. 3rd Aug. 1912.

Personal Assistant, D. G. Watson.

Chief Secretary, F. S. A. Slocock, C. I. E., I. C. S.,

Registrar, R. W. Johnson.

Secretary, Public Works Department, (Irrigation Branch) A. J. Wadley.

Financial Commissioner, H. A. Crump.

Commissioner of Settlements and Director of Land Records, H. E. Hemingway, I. C. S.

### BERAR.

Commissioner, F. G. Sly, C.S.I.

### Members of Council.

#### NOMINATED MEMBERS.

Mr. Henry Ashbrooke Crump, C.S. I., I. C.S.

" Bertram Prior Standen, C.I.E., I.C.S.

" John Thomas Martin, I.C.S.

" Alfred John Wadley.

" John Hullah, I. C. S.

Mr. Charles Stewart Findlay, I.C.S.	R. Temple ( <i>Officiating</i> ) .. .. .	1862
" F. S. A. Slocock, C.I.E., I.C.S.	Colonel E. K. Elliot .. .. .	1863
Col. George William Patrick Denny, C.I.E., I.M.S.	J. S. Campbell ( <i>Officiating</i> ) .. .. .	1864
Mr. R. C. H. Moss King, I.C.S.	R. Temple .. .. .	1864
" C. E. W. Jones, M.A.	J. S. Campbell ( <i>Officiating</i> ) .. .. .	1865
" Percy Hemingway, I.C.S.	R. Temple .. .. .	1865
NON-OFFICIALS.	J. H. Morris ( <i>Officiating</i> ) .. .. .	1867
Raja Jawahir Singh of Sarangarh.	G. Campbell .. .. .	1867
Khan Bahadur Nawab Muhammad Salamullah Khan, C.I.E.	J. H. Morris ( <i>Officiating</i> ) .. .. .	1868
Diwan Bahadur Seth Sir Kasturchand Daga, K.C.I.E.	Confirmed 27th May 1870.	
Rai Bahadur Sir Bipin Krishna Bose, Kt., C.I.E.	Colonel R. H. Keatinge, C.S.I. ( <i>Offg.</i> ) .. .. .	1870
ELECTED MEMBERS.	J. H. Morris, C.S.I. .. .. .	1872
Mr. Sheo Prasad Shrivastava, B.A., LL. B.	C. Grant ( <i>Officiating</i> ) .. .. .	1879
Rai Sahib Seth Nathmal, B.A.	J. H. Morris, C.S.I. .. .. .	1879
Mr. Moreswar Rao Dixit, B.A. Bar-at-Law	W. B. Jones, C.S.I. .. .. .	1883
Rai Sahib Mathura Prasad.	C. H. T. Crosthwaite ( <i>Officiating</i> ) .. .. .	1884
Rao Bahadur Narayan Rao Kelkar	Confirmed 27th January 1885.	
Raja Bahadur Raghoji Rao Rhonsle.	D. Fitzpatrick ( <i>Officiating</i> ) .. .. .	1885
Rao Bahadur Ranganath Narajha Mudholkar, B.A., LL. B.	J. W. Nell ( <i>Officiating</i> ) .. .. .	1887
Rao Bahadur Keshav Govind Damle, B.A., LL. B.	A. Mackenzie, C.S.I. .. .. .	1887
Mr. Moropant Vishwanath Joshi, B.A., LL. B.	R. J. Crosthwaite ( <i>Officiating</i> ) .. .. .	1889
MISCELLANEOUS APPOINTMENTS.	Until 7th October 1889.	
Director of Public Instruction, A. G. Wright, M.A.	J. W. Nell ( <i>Officiating</i> ) .. .. .	1890
Inspector-General of Police, R. C. H. M. King, I.C.S.	A. P. MacDonnell, C.S.I. .. .. .	1891
Chief Conservator of Forests, Montague Hill, C.I.E., F.L.S.	J. Woodburn, C.S.I. ( <i>Officiating</i> ) .. .. .	1893
Inspector-General of Civil Hospitals, Col. G. W. P. Denny, I.M.S.	Confirmed 30th November 1893.	
Sanitary Commissioner, Col. G. W. P. Denny, I.M.S.	C. J. Lyall, C.S.I., C.I.E. .. .. .	1895
Commissioner of Excise, etc., A. E. Nelson, I.C.S., Comptroller (Financial Dept.), J. S. Milne.	D. C. J. Ibbetson, C.S.I. .. .. .	1898
Postmaster-General, H. A. Sams.	A. H. L. Fraser, C.S.I. ( <i>Officiating</i> ) .. .. .	1899
Director of Agriculture and Industries, C. G. Leftwich, I.C.S.	Confirmed 5th March 1902.	
Registrar of Co-operative Credit Societies, H. R. Crosthwaite.	J. P. Hewett, C.S.I., C.I.E. ( <i>Officiating</i> ) .. .. .	1902
CHIEF COMMISSIONERS.	Confirmed 2nd November 1903.	
Colonel E. K. Elliot .. .. .	F. S. P. Lely, C.S.I. ( <i>Officiating</i> ) .. .. .	1904
Lieut.-Colonel J. K. Spence ( <i>Officiating</i> ) .. .. .	Confirmed 23rd December 1904.	
	J. O. Miller, C.S.I. .. .. .	1905
	S. Ismay, C.S.I. ( <i>Officiating</i> ) .. .. .	1906
	Until 22nd October 1906.	
	F. A. T. Phillip ( <i>Officiating</i> ) .. .. .	1907
	Until 25th March 1907. Also from 20th May to 22nd November .. .. .	1909
	R. H. Craddock, C.S.I. .. .. .	1907
	H. A. Crump ( <i>Officiating</i> ) .. .. .	1912
	M. W. Fox-Strangways, C.S.I. ( <i>Sub. prom.</i> ) .. .. .	1912
	Sir B. Robertson, K.C.S.I., C.I.E. .. .. .	1912



## North-West Frontier Province.

The North-West Frontier Province, as its name denotes, is situated on the north-west frontier of the Indian Empire. It is in form an irregular strip of country lying north by east and south by west and may generally be described as the tract of country, north of Baluchistan, lying between the Indus and the Durand boundary line with Afghanistan. To the north it extends to the mountains of the Hindu Kush. From this range a long broken line of mountains runs almost due south, dividing the province from Afghanistan, until the Sulaiman Range eventually closes the south of the Province from Baluchistan. The greatest length of the province is 408 miles, its greatest breadth 279 miles and its total area about 39,000 square miles. The territory falls into three main geographical divisions: the Cis-Indus district of Hazara; the narrow strip between the Indus and the Illis, containing the Districts of Peshawar, Kohat, Banu and Dera Ismail Khan, and the rugged mountainous regions on the north and west between those districts and the border line of Afghanistan. Hazara and the four districts in the second division contain 13,418 square miles. The mountain regions, north and west, are occupied by tribes subject only to the political control of the Chief Commissioner in his capacity as Agent to the Governor-General. The area of this tract is roughly 25,500 square miles and in it are situated, from north to south, the political agencies severally known as the Malakand, Khyber, Kurram, Tochi and Wana Agencies. Each of the Deputy Commissioners of the five administered districts is responsible for the management of political relations with certain tribes or sections of the tribes across the frontier. A few hundred miles of the trans-border Territory are internally administered by the Political Agents, but the bulk of the trans-border population is free from any internal interference, so long as offences are not committed and so long as the tribes observe the conditions on which allowances are paid to many of them.

The area of the Province is a little more than half that of Bombay (excluding Sind and Aden) and amounts to more than three-fifths of the size of England without Wales. The density of population throughout the Province equals 98 persons to a square mile, but in the more favoured portions the pressure of population is much greater. In the Hazara District there are 207 persons to a square mile and in the trans-Indus plains tract the number is 152. The key to the history of the people of the N.-W. F. P. lies in the recognition of the fact that the valley of Peshawar was always more closely connected politically with Eastern Iran than with India, though in pre-Mahomedan times its population was mainly Indian by race. Early history finds the Iranians dominating the whole Indus valley. Then came the Greek invasion under Alexander the Great, in B.C. 327, then the invasions of the Sakas, and of the White Huns, and later, the two great waves of Muhammadan invasion. Last came the Sikh invasion, beginning in 1818. The Frontier Territory was annexed by the British in 1849 and placed under the control of the Punjab Government. Frequent

warfare occurred with the border tribes; but since the conclusion of peace with the Afridis in 1898, the whole border has been undisturbed except for the expedition against the Zakka Khel Afridis in 1903.

The division of the Frontier Province from the Punjab was frequently discussed, with the double object of securing closer and more immediate control and supervision of the Frontier by the Supreme Government and of making such alterations in the personnel and duties of frontier officials as would tend to the establishment of improved relations between the local British representatives and the independent tribesmen. The province was eventually removed from the control of the Punjab administration in 1901. To it was added the political charge of Dir, Swat and Chitral, the Political Agent of which had never been subordinate to the Punjab. The new Province was constituted under a Chief Commissioner and Agent to the Governor-General, with headquarters at Peshawar, in direct communication with the Government of India in the Foreign Department. In political questions there is no intermediary between the Chief Commissioner and the local officer; an arrangement designed to secure both prompt disposal of references and the utilisation of the expert knowledge of frontier conditions for which the head of the administration is selected.

### The People.

The total population of the N.-W.F.P. (1911) is 3,819,027, made up as follows:—

Hazara .. ..	603,028
Trans-Indus Districts .. ..	1,593,905
Trans-Border Area .. ..	1,622,094

This last figure is estimated. There are only 625·6 females per 1,000 males in the towns and 900 females per 1,000 males in rural areas. This disproportion of the sexes cannot at present be explained in the N.-W.F.P. any more than in other parts of Northern India, where it also appears. The discrepancy is greater here than in any other Province of India. There is no ground for believing that the neglect of girls in infancy has any effect in causing the phenomenon. On the other hand the female population has to face many trials which are unknown to men. The evils of unskilled midwifery and early marriage are among them. Both the birth and death-rates of the Province are abnormally low. The birth rate in the administered districts, according to the last annual official reports, was 35·1 and the death-rate 33·3. There were 122·5 male births for every 100 females. It is recognised that in this matter, and in regard to population generally the registration of females may be defective, inasmuch as the Pathan, for whatever reasons, regards the birth of a daughter as a misfortune, the less said about which the better. The population is naturally increasing, but emigration reduces the net result.

The dominant language of the Province is Pashtu and the population contains several lingual strata. The most important sections of the population, both numerically and by social position, are the Pathans. They own

a very large proportion of the land in the administered districts and are the ruling race, of the tribal area to the west. There is a long belt of Pathan, Baluch, Rajput and other tribal divisions. Gurkhas have recently settled in the Province. The Mahomedan tribes constitute almost the whole population, Hindus amounting to only 5 per cent. of the total and Sikhs to a few thousands. The occupational cleavage of the population confuses ethnical divisions.

Under the North-West Frontier Province Law and Justice Regulation of 1901, custom governs all questions regarding successions, betrothal, marriage, divorce, the separate property of women, dower, wills, gifts, partitions, family relations such as adoption and guardianship, and religious usages and institutions, provided that the custom be not contrary to justice, equity or good conscience. In these matters the Mahomedan or Hindu law is applied only in the absence of special custom.

#### **Climate, Flora and Fauna.**

The climatic conditions of the N.-W.F.P., which is mainly the mountainous region, but includes the Peshawar Valley and the riverine tracts of the Indus in Dera Ismail Khan District, are extremely diversified. The latter district is one of the hottest areas of the Indian continent, while on the mountain ranges the weather is temperate in summer and intensely cold in winter. The air is generally dry and hence the annual ranges of temperature are frequently very large. The Province has two wet seasons, one the S.-W. Monsoon season, when moisture is brought up from the Arabian Sea and the Bay of Bengal; the other in winter, when storms from Mesopotamia, Persia and the Caspian Districts bring widespread rain and snowfall. Both sources of supply are precarious and not infrequently either the winter or the summer rainfall fails almost entirely. The following description of the Daman, the high ground above the Indus, stretching across Dera Ismail Khan to the mountains on the west, occurs in a account written some years ago by Captain Crosthwaite: "Men drink once a day and the cattle every second day. Washing is an impossible luxury. . . . It is possible in the hot weather to ride thirty miles and neither hear a dog bark nor see the smoke of a single fire." With the exception of the Kunhar River, in Hazara, which flows into the Jhelum, the whole territory drains into the Indus. The flora of the Province varies from the shrubby jungle of the south-eastern plains to barren hills, pine forests and fertile mountain valleys. Tigers used to abound in the forests but are not quite extinct; leopards, hyenas, wolves, jackals and foxes are the chief carnivora. Bear, deer and monkeys are found; a great variety of fish is caught in the Indus.

The mountain scenery is often magnificent. The frontier ranges contain many notable peaks of which the following are the principal: Takht-i-Sulaiman, Sulaiman Range, in Dera Ismail Khan, 11,292 feet.

Pir Ghal, Sulaiman Range, in Mahsud Waziristan, 11,583 feet.

Sika Ram, in the Safed Koh, in the Kurram Agency, 15,621 feet.

Kagan Peaks of the Himalayas, in the Hazara District, 10,000 to 16,700 feet.

Istragh Peak (18,900 ft.), Kachin Peak 22,641 ft.), Tirich Mir (25,426 ft.), all in the Hindu Kush, on the northern border of Chitral Agency.

#### **Trade and Occupations.**

The population derives its subsistence almost wholly from agriculture. The Province is practically without manufactures. There is no considerable surplus of commercial products for export. Any commercial importance which the province possesses it owes to the fact that it lies across the great trade routes which connect the trans-border tribal territories and the marts of Afghanistan and Central Asia with India, but the influence of railways is diminishing the importance of these trading interests. The travelling traders (or Powindahs) from the trans-frontier area have always pursued their wanderings into India and now, instead of doing their trading in towns near the border, carry it by train to the large cities in India. Prices of agricultural produce have in recent years been high, but the agriculturists, owing to the poverty of the means of communication, have to some extent been deprived of access to Indian markets and have therefore been unable to profit by the rates prevailing. On the other hand, high prices are a hardship to the non-agricultural classes. The effects of recent extensions of irrigation have been important. Land tenures are generally the same in the British administered districts as in the Punjab. The cultivated area of the land amounts to 32 per cent. and uncultivated to 68 per cent.

The work of civilisation is now making steady progress. Relations with the tribes have improved, trade has advanced, free medical relief has been vastly extended, police administration has been reformed and the desire of people for education has been judiciously and sympathetically fostered. In the British administered districts 19 per cent. males and 7 per cent. females of the total population are returned as literates. The figures for males denote a very narrow diffusion of education even for India. Those for females are not notably low, but they are largely affected by the high literacy amongst Sikh women, of whom 13·3 per cent. are returned as literate. The inauguration of a system of light railways throughout the Province, apart from all considerations of strategy, must materially improve the condition of the people and also by that means strengthen the hold of the administration over them. The great engineering project of the Upper Swat River Canal, which was completed in 1914, and the lesser work of the Peshawar Canal, also completed a year or two ago, will bring ease and prosperity to a number of peasant homes. There has arisen in recent years the difficult question of the importation of thousands of rifles from the Persian Gulf. Elaborate measures were taken to stamp out the traffic, under the direction of the Naval Commander-in-Chief in the East Indies; and with the tardy consent of France an agreement was made with the Sultan of Muscat, to stop the trade in arms from that place, Muscat having been the entrepot for the traffic.

#### **Administration.**

The administration of the North-West Frontier Province is conducted by the Chief

Commissioner and Agent to the Governor-General in Council. His staff consists of—

- (1) Officers of the Political Department of the Government of India.
- (2) Members of the Provincial Civil Service.
- (3) Members of the Subordinate Civil Service.
- (4) Superintendents and Assistant Superintendents of Police.
- (5) Officers recruited for the service of departments requiring special knowledge—Militia, Engineering, Education, Medicine and Forestry.

The cadre posts reserved for officers coming under the first head above are:—

Administration.	Chief Commissioner & Agent to the Governor-General	5
	Secretary	
	Assistant Secretary	
	Personal Assistant	
	Revenue Commissioner and Revenue Secretary	
	Resident in Waziristan...	1
	Deputy Commissioners	5
	Political Agents	4
	District Judges	2
	Assistant Commissioners and Assistant Political Agents	12
High Court and Divisional Judges.	One Judicial Commissioner.	3
	Two Divisional and Sessions Judges.	

The districts under the Deputy Commissioners are divided into from two to five sub-collectorates, in charge of tahsildars, who are invested with criminal and civil and revenue powers, and are assisted by naib-tahsildars, who exercise only criminal and revenue powers. Some sub-divisions are in charge of Assistant or Extra Assistant Commissioners. The village community characteristic of some parts of India is not indigenous among the Pathans. Its place as a social unit is to some extent taken by the tribe, which is held together by the ties of kinship and ancient ancestry, real or imaginary. Modern municipal local government has been introduced in the towns. There are also district boards. The district is the unit for police, medical and educational administration and the ordinary staff includes a District Superintendent of Police, a Civil Surgeon, who is also the Superintendent of Jail and a District Inspector of Schools. The Province forms a single educational circle and only possesses one forest division, that of Hazara. There are four divisions of the Roads and Building Branch of the Public Works Department, each under an Executive Engineer. The Irrigation Department of the P.W.D. is in charge

of the Chief Engineer, Irrigation, Punjab, who is also *ex-officio* Secretary to the Chief Commissioner. The administration of the civil police force of the districts is vested in an Inspector-General. There is a special force of Border military police. The revenue and expenditure of the Province are wholly Imperial. Of the Agencies only Kurram and Tochi Valley pay land revenue to the British Government. The revenue administration of all five administered districts is controlled by the Revenue Commissioner. For the administration of civil and criminal justice there are two Civil and Sessions divisions, each presided over by a Divisional and Sessions Judge. The Judicial Commissioner is the controlling authority in the Judicial branch of the administration, and his Court is the highest criminal and appellate tribunal in this Province. The principal officers in the present Administration are:—

*Agent to Governor-General and Chief Commissioner.* Lieut.-Col. Sir G. O. Roos-Keppel, K.C.S.I., K.C.I.E., assumed charge, 4th June 1908.

*Resident, Waziristan,* Sir J. S. Donald, C.S.I., K.C.I.E.

*Judicial Commissioner,* W. P. Barton, C.I.E., I.C.S.

*Revenue Commissioner,* Lieut.-Col. D. B. Blake-way, C.I.E., I.A.

*Secretary to Chief Commissioner,* E. H. Kealy.  
*Asst. Secretary to Chief Commissioner,* C. Latimor.

*Indian Personal Asst. to Chief Commissioner,* Risaldar Moghal Baz Khan.

*Inspecting Officer, Frontier Corps,* Lieut.-Col. J. S. Kemball, I.A.

*Secretaries, Public Works Department,* Col W. J. D. Dundee, C.I.E., F. W. Carne.

*Agency Surgeon and Administrative Medical Officer,* Lieut.-Col. T. W. Irvine, I.M.S.

*Divisional and Sessions Judges,* Lieut.-Col. C. F. Minchin, D.S.O., I.A., F. P. Rennie.

#### Political Agents.

Major W. J. Keen, I.A., Dir, Swat & Chitral.

S. E. Pears, Khyber.

Major F. H. Humphrys, I. A. Tochi.

Major R. Garratt, I.A., Kurram.

*Inspector-General of Police,* H. A. Close.

*Director of Public Instruction,* J. A. Richey, M.A.

*Superintendent, Archaeological Survey,* Sir M. A. Stein, K.C.I.E., Ph.D. Litt. D.S.C.

#### Former Chief Commissioners.

Lieut.-Col. H. A. Deane, C.S.I. Died 7th July 1908.

W. R. H. Merk, C.S.I. Officiating to 31st Oct. 1910.

The Province of Assam, 61,682 square miles in area, includes the Assam Valley Division, the Surma Valley and Hills Division and the State of Manipur. It owes its importance to its situation on the north-east frontier of India. It is surrounded by mountainous ranges on three sides while on the fourth (the west) lies the Province of Bengal on to the plains of which debouch the two valleys of the Brahmaputra and the Surma which form the plains of Assam. These two valleys are separated from each other by the Assam Range, which projects westward from the hills on the eastern border.

### Population.

The total population of the province in 1911 was 7,059,857, of whom 1½ millions were Mahomedans, 3½ millions Hindus and 1½ millions Animists. 46 per cent. of the population speak Bengali, 22 per cent. speak Assamese; other languages spoken in the province are Hindi, Uriya and a great variety of languages classified under the general heading of the Tibeto-Chinese languages. Owing to the great areas of waste and rivers the density of the province is only 115, which, compared with that of most other parts of India, is low, but is more than double that of Burma.

### Agricultural Products.

It has agricultural advantages for which it would be difficult to find a parallel in any part of India, climate, soil, rainfall and river systems all being alike favourable to cultivation. Rice is the staple food crop, about 4 million acres being devoted to this crop. Except in the Himalayan Terai irrigation is unnecessary. Jute and tea are the most important crops grown for export; the area under jute being generally about 40,000 acres, that under tea about 376,000 acres. In 1915 the total number of tea gardens was 779, the production being estimated at 245,385,920 lbs. Wheat and tobacco are also grown and about 30 square miles are devoted to sugarcane. The total area of 'reserved' forest is about 3,778 square miles and the unclassified state forests cover about 18,509 square miles.

### Meteorological Conditions.

Rainfall is everywhere abundant, and ranges from 93 to 124 inches. The maximum is reached at Cherrapunji in the Khasi Hills, which is one of the wettest places in the world, having a rainfall of 459 inches. The temperature ranges from 59° at Sibsaigar in January to 84° in July. Earthquakes of considerable severity have taken place, by far the worst being that which occurred in 1897.

### Land Tenures.

Most of the actual cultivators of the soil usually hold direct from the State, and the area of land on which rent is paid is inconsiderable. A large part of Goalpara and of the more densely populated portions of Sylhet was however included in the permanent settlement of Bengal; and the system of land tenure in Cachar, and the existence of large estates on privileged rates of revenue in Kamrup have tended to produce a tenant class which at the 1901 census amounted to more than one-third of the total number of persons supported by agriculture. In the 1911 census a very marked

increase in tenancy throughout the Province is shown.

The Assam Labour and Emigration (Amendment) Bill was passed on the 24th March 1915. The Act carries with it the abolition of the recruiting contractor and the creation of a Labour Bureau to supervise recruiting.

### Mines and Minerals.

The only minerals in Assam worked on a commercial scale are coal, limestone and petroleum oil. The most extensive coal measures are in the Naga Hills district, where about 300,000 tons are raised annually and used mainly by the river steamers. Limestone is quarried in the Khasi and Jaintia Hills, in Sylhet, and in the Gare hills. Petroleum is worked only in Lakhimpur.

An account of the petroleum occurrences in Assam was recently published in the memoirs of the Geological Survey of India. It states that the petroleum localities in this province are confined to a curved belt of country along the basins of the Brahmaputra and Surma. This belt is traceable over a distance of some 800 miles from N.E. Assam through Kachar and Chitragong to the Arakan coast, where it has a S.S.E. trend. It is roughly concentric with the trend of the Burmese oil belt, the distance between the two varying from 70 to 150 miles.

### Manufactures and Trade.

Silk is manufactured in the Assam Valley; the weaving being done by the women. Cotton weaving is also largely practised by the women, and almost every house contains a loom; the cloth is being gradually displaced by imported goods of finer texture and colour. Boat building, brass and metal and earthenwares, tea manufacture and limestone burning are the other industries apart from agriculture, which itself employs about 84 per cent. of the population. Assam carries on a considerable trade with the adjoining foreign tribes and countries. In 1915-16 the value of frontier trade registered was about Rs. 23 lakhs. The decrease in both imports and exports is attributable mainly to the contraction of trade with Bhutan, the proportion of the trade carried on with this country being about 96 per cent. of the total in recent years. The value of the total trade with Bhutan was about Rs. 21½ lakhs in the year under review as compared with approximately Rs. 34½ lakhs in the previous year. The decrease is ascribed largely to the occurrence of a few cases of cholera in a Bhutia encampment above Subankhata, in consequence of which the Bhutan authorities ordered the return of the Bhutias to the country earlier than usual. The export trade with Abor, Mishmi and other tribes declined from Rs. 34,272 to Rs. 26,611 owing to chiefly to a lesser demand for opium.

### Communications.

The trade of Assam is chiefly carried by river, but increasing use is being made of the Assam Bengal Railway which runs from the port of Chittagong to Silchar at the eastern end of the Surma Valley. A branch of that line runs along the south of the Assam Valley from Gauhati to Tinsukia, a station on the Dibrugarh Railway, and is connected with the

Surma Valley branch by a line that pierces the North Cachar Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. The Eastern Bengal State Railway connects Assam with the Bengal system via the valley of the Brahmaputra. The excellence of its water communication makes Assam less dependent upon roads than other parts of India; but in recent years the road system has been developed and there is a trunk road through the whole length of the Brahmaputra Valley and an excellent road from Gauhati to Shillong. A large fleet of steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh.

### Finance.

Gross receipts in 1914-15 fell, as compared with the previous year, from Rs. 1,76,04,958 to Rs. 1,72,44,772 and gross expenditure from Rs. 1,86,99,333 to Rs. 1,71,53,295. The provincial account opened with a balance of Rs. 55,88,803, which included Imperial assignments for various purposes aggregating Rs. 35,68,000. Receipts amounted to Rs. 1,40,87,266 and expenditure to Rs. 1,67,27,191. Further Imperial assignments, amounting to Rs. 4,48,000, were received during the year and, with the unspent balance of the former assignments, accounted for Rs. 20,28,000 out of the total closing balance of Rs. 29,48,878.

### Education.

There are in the Province at present 4,822 educational institutions including two Arts Colleges with 233,885. Of the total population 333,672 are returned as literate. The distribution of literacy naturally varies considerably throughout the Province. The large number of immigrant coolies and of aboriginal tribes tends to lower the proportion of literates in the Brahmaputra Valley, and a comparatively high standard of literacy in the Hills is due mainly to the progress of education amongst the Khasis of whom a large proportion have been converted to Christianity. Amongst the Animists in the Hills the Lushais seem to have an extraordinary keenness for learning, which is the more remarkable, because the administration of their district dates from quite recent times.

### Administration.

The province of Assam was originally formed in 1874 in order to relieve the Lieutenant-Governor of Bengal of part of the administration of the huge territory then under him. In 1903, as the result of further deliberations, it was decided to add to the small Province of Assam the eastern portion of its unwieldy neighbour and to consolidate those territories under a Lieutenant-Governor. The Province of Eastern Bengal and Assam as then constituted was again broken up on the 1st of April, 1912: the Eastern Bengal Districts were united with the Bengal Commissionerships of Burdwan and the Presidency to form the Presidency of Bengal under a Governor-in-Council, Bihar, Chota Nagpur and Orissa were formed into a separate province, while the old Province of Assam was re-constituted under a Chief Commissioner.

The capital is Shillong, a town laid out with great taste and judgment among the pine woods on the slopes of the Shillong Range which rises to a height of 6,450 feet above the sea. It was destroyed in the earthquake of 1897 and has been rebuilt in a way more likely to withstand the shocks of earthquake.

*Chief Commissioner*, Sir Arohdale Earle, K.C.I.E. appointed 1st April, 1912.

*Personal Asst.*, Capt. W. Lowry-Corry.

*Chief Secretary*, B. C. Allen.

*Second Secretary*, A. W. Botham.

*Secretary, Public Works Department*, F. O. Oertel.

*Officiating Inspector General of Registration*, S. N. Mackenzie, I.C.S.

*Judges*, F. J. Jeffries, J. F. Graham.

*Director of Public Instruction*, J. R. Cunningham.

*Inspector-General of Police*, Lt.-Col. A. E. Woods.

*Sanitary Commissioner*, Major T. C. M. Young M. B., I.M.S.

*Comptroller, Financial Department*, W. A. T. Carnduff.

*Political Agent in Manipur*, Lt.-Col. H. W. G. Cole, C.S.I.

*Superintendent and Remembrancer of Legal Affairs*:—Abdul Majid, B.A.

*Director of Land Records and Agriculture*, A. R. Edwards, B.A., I.C.S.

*Superintendent, Archaeological Survey, Eastern Circle*, D. B. Spooner.

*Chief Inspector of Factories*, R. P. Adams.

### LEGISLATIVE COUNCIL.

*Lieut.-Col.* P. R. T. Gurdon, F. O. Oertel, Lieut.-Colonel D. Herbert, J. R. Cunningham, M.A., J. F. Graham, Abdul Majid, A. B. Hawkins, Rajendra Narayan Chaudhuri, Raj Nalini Kanta Ray Dastidar, Munshi Riaz Bakish, Col. H. E. Banatvala, B. C. Allen, A. W. Botham.

### Elected Members.

Raj Gana-yam Parna, Maulvi Saiyid Abdul Majid, Khan Bahadur, Maulvi Sa'id Muhammad Saadulla, Phandhar Chaitra Raj Sahib, Mr. Tarun Ram Phukan, Ramani Mohan Das, Babu Radha Binod Das, Mr. R. St. J. Hickman, Muhammad Bakht Mazumdar, Khan Bahadur. Mr. H. Miller, Mr. H. B. Fox.

### Chief Commissioners of Assam.

Colonel R. H. Keatinge, C.S.I.	..	..	1874
Sir S. C. Bayley, K.C.S.I.	..	..	1878
C. A. Elhot, C.S.I.	..	..	1881
W. E. Ward	..	..	1886
Dennis Fitzpatrick, C.S.I.	..	..	1883
J. Westland, C.S.I.	..	..	1887
J. W. Quinton, C.S.I.	..	..	1889
Brig.-General Sir H. Collett, K.C.B.	..	..	1891
W. E. Ward, C.S.I.	..	..	1891
C. J. Lyall, C.S.I.	..	..	1894
H. J. S. Cotton, C.S.I.	..	..	1896
J. B. Fuller, C.I.E.	..	..	1900
J. B. Fuller, C.I.E.	..	..	1902
C. W. Bolton, C.S.I.	..	..	1903

*Note*.—The Chief Commissionership of Assam was revived 1st April, 1912.

Sir Arohdale Earle, K.C.I.E. .. .. 1913

## Baluchistan.

Baluchistan is an oblong stretch of country occupying the extreme western corner of the Indian Empire. It is divided into three main divisions; (1) British Baluchistan with an area of 9,476 square miles consisting of tracts assigned to the British Government by treaty in 1879; (2) Agency Territories with an area of 44,345 square miles composed of tracts which have, from time to time, been acquired by lease or otherwise brought under control and placed directly under British officers; and (3) the Native States of Kalat and Las Bela with an area of 78,434 square miles. The Province embraces an area of 134,638 square miles and according to the census of 1911 it contains 834,703 inhabitants, divided roughly half and half between the administered districts and States.

The country, which is almost wholly mountainous, lies on a great belt of ranges connecting the Safed Koh with the hill system of Southern Persia. It thus forms a watershed the drainage of which enters the Indus on the east and the Arabian Sea on the south while on the north and west it makes its way to the inland lakes which form so large a feature of Central Asia. Rugged, barren, sun-burnt mountains, rent by high chasms and gorges, alternate with arid deserts and stony plains, the prevailing colour of which is a monotonous sight. But this is redeemed in places by level valleys of considerable size in which irrigation enables much cultivation to be carried on and rich crops of all kinds to be raised.

The political connection of the British Government with Baluchistan commenced from the outbreak of the First Afghan War in 1839; it was traversed by the Army of the Indus and was afterwards occupied until 1842 to protect the British lines of communication. The districts of Kachi, Quetta and Mastung were handed over to the Amir of Afghanistan and Political Officers were appointed to administer the country. At the close of the First Afghan War, the British withdrew and these districts were assigned to the Khan of Kalat. The founder of the Baluchistan Province as it now exists was Sir Roberts Sandeman who broke down the close border system and welded the Baluch and Brahui Chiefs into a close confederacy. In the Afghan War of 1879 Pishin Sibi, Harnai and Thal-Chotali were handed over by Yakub Khan to the British Government and retained at Sir Robert Sandeman's strenuous insistence.

### Industries.

Baluchistan lies outside the monsoon area and its rainfall is exceedingly irregular and scanty. Shahrig which has the heaviest rainfall, records no more than 11½ inches in a year. In the highlands few places receive more than 10 inches and in the plains the average rainfall is about 5 inches, decreasing in some cases to 3. The majority of the indigenous population are dependent for their livelihood on agriculture, provision and care of animals and transport. The Afghan and the Baluch, as a rule, cultivate their own lands. The Brahuis dislike agriculture and prefer a pastoral life. Previous to the advent of the British life and property were so insecure that the cultivator was fortunate if he reaped his harvest. The

establishment of peace and security has been accompanied by a marked extension of agriculture which accounts for the increase in the numbers of the purely cultivating classes. The Mekran Coast is famous for the quantity and quality of its fish and the industry is constantly developing. Fruit is extensively grown in the highlands and the export is increasing.

Education is imparted in 143 schools with 4,128 scholars. The mineral wealth of the Province is believed to be considerable, but cannot be exploited until railways are developed. Coal is mined at Khost on the Sind-Pishin railway and in the Bolan Pass. Chromite is extracted in the Quetta-Pishin District, but the industry awaits the extension of the railway from Kharai to Hingubagh for its adequate exploitation. Limestone is quarried in small quantities. An oil-prospecting licence has been granted by the Las Bela State to the Burma Oil Company.

### Administration.

The head of the local administration is the officer styled Agent to the Governor-General and Chief Commissioner. Next in rank comes the Revenue Commissioner who advises the Agent to the Governor-General in financial matters and generally controls the revenue administration. The keynote of administration in Baluchistan is self-government by the tribesmen, as far as may be, by means of their Jirgas or Councils of Elders along the ancient customary lines of tribal law, the essence of which is the satisfaction of the aggrieved and the settlement of the feud, not retaliation on the aggressor or the vindictive punishment of a crime. The district levies which number 2,300 odd play an unobtrusive but invaluable part in the work of the Civil Administration not only in watch and ward and the investigation of crime, but also in the carrying of the mails, the serving of processes and other miscellaneous work. In addition to these district levies there are three irregular Corps in the Province—the Zhob Militia (formerly known as the Zhob Levy Corps), the Makran Levy Corps, and the Chagal Levy Corps. Their combined strength in the latest returns was 953 cavalry and 892 infantry. The Province does not pay for itself and receives large subsidies from the Imperial Government. The receipts and expenditure roughly balance each other at 29 lakhs.

### ADMINISTRATION.

*Agent to the Governor-General and Chief Commissioner*, The Hon'ble Lieut.-Colonel Sir John Ramsay, K.C.I.E., C.S.I., I.A.  
*Revenue and Judicial Commissioner*, Lieut. Colonel A. McConaghey, C.I.E.  
*Secretary, Public Works Department*, Colonel R. S. Maclean, C.B., C.S.I.  
*First Assistant to the Agent to the Governor-General and Secretary to the Chief Commissioner*, A. N. L. Cater, I.C.S.  
*Second Assistant to the Agent to the Governor-General*, Captain G. B. Walker, I.A.  
*Political Agent, Zhob*, Jacob, Major, A. L., I.A.  
*Assistant Political Agent, Zhob*, Major C. T. Daukes, I.A.  
*Political Agent, Kalat and Bolan Pass*, Dew Lieut.-Colonel A. B., C.I.E., I.A.

*Assistant Political Agent, Kalat and Bolan Pass,*  
C. H. Gidney, I.C.S.

*Assistant for Mekran to the Political Agent in Kalat and ex-officio Commandant, Mekran Levy Corps,* Captain T. G. M. Harris.

*Political Agent, and Deputy Commissioner, Quetta and Pishin,* Lieut.-Colonel Major H. B. St. John, C.I.E., I.A.

*Assistant Political Agent and Assistant Commissioner, Quetta and Pishin,* Major H. V. Biscoe.

*Political Agent, Chagai,* Major W. G. Hutchinson, I.A.

*Political Agent and Deputy Commissioner, Sibi,* Major F. McConaghey.

*Assistant Political Agent, Sibi,* T. J. C. Acton, I.C.S.

*Political Agent, Loralai,* Major A. D. G. Ramsay.

*Assistant Political Agent, Loralai,* Major C. E. Bruce.

*Residency Surgeon and Chief Medical Officer, Duke,* Lieut.-Colonel A. L., I.M.S.

*Civil Surgeon, Sibi,* Dr. A. C. J. Elwin.

## ANDAMAN AND NICOBAR ISLANDS.

This is a group of islands in the Bay of Bengal of which the headquarters are at Port Blair, by sea 780 miles from Calcutta, 740 miles from Madras and 360 miles from Rangoon, with which ports there is regular communication.

The land area of the islands under the administration is 3,143 square miles, namely, 2,508 square miles in the Andamans and 635 square miles in the Nicobars. The total population of the islands was returned in the census of 1911 as 26,459. The islands are administered by the Chief Commissioner of the Andaman and Nicobar Islands who is also the Superintendent of the Penal Settlement. The penal settlement, which was established in 1858, is the most important in India.

*Superintendent of Port Blair,* Lieut.-Col. M. W. Douglas, C.I.E.

*Commandant and District Superintendent of Military Police,* Captain H. W. Rowlandson.

*Medical Superintendent of Jails, and Senior Medical Officer,* Major J. H. Murray, I.M.S.

## COORG.

Coorg is a small petty Province in Southern India west of the State of Mysore. Its area is 1,582 square miles and its population 174,976. Coorg came under the direct protection of the British Government during the war with Sultan Tipu of Seringapatam. In May 1834, owing to misgovernment, it was annexed. The Province is directly under the Government of India and administered by the Chief Commissioner of Coorg who is the Resident in Mysore with his headquarters at Bangalore. In him are combined all the functions of a local government and a High Court. The Secretariat is at Bangalore where the Assistant Resident is styled Secretary to the Chief Commissioner of Coorg. In Coorg his chief authority is the Commissioner whose headquarters are at Mercara and whose duties extend to every branch of the administration. The chief wealth of the country is agriculture and especially the growth of coffee. Although owing to over-production and insect pests coffee no longer commands the profits it once enjoyed, the Indian output still holds its own against the severe competition of Brazil. The bulk of the output is exported to France.

*Resident and Chief Commissioner, Coorg,*  
The Hon. Mr. H. V. Cobb, C.S.I., C.I.E., I.C.S.

## AJMER-MERWARA.

Ajmer-Merwara is an isolated British Province in Rajputana. The Agent to the Governor-General in Rajputana administers it as Chief Commissioner. The Province consists of two small separate districts, Ajmer and Merwara, with a total area of 2,711 square miles and a population of 501,395. At the close of the Pindari war Daulat Rao Scindia, by a treaty dated June 25, 1818, ceded the district to the British. Fifty-five per cent. of the population are supported by agriculture, the industrial population being principally employed in the cotton and other industries. The principal crops are maize, millet, barley, cotton, oil-seeds and wheat.

*Agent to the Governor-General in Rajputana and Chief Commissioner of Ajmer-Merwara,*  
The Hon. Lieut.-Col. Sir E. G. Colvin, K.C.S.I.

## Aden.

Aden was the first new territory added to the Empire after the accession of Queen Victoria. Its acquisition in 1839 was the outcome of an outrage committed by the local Fadhli chief upon the passengers and crew of a British bugalow wrecked in the neighbourhood. Various acts of treachery supervened during the negotiations regarding the bugalow outrage and Aden was captured by a force sent by the Bombay Government under Major Baillie. The act has been described as one of those opportune political strokes which have given geographical continuity to British possessions scattered over the world.

Aden is an extinct volcano, five miles long and three broad, jutting out to sea much as Gibraltar does, having a circumference of about 15 miles and connected with the mainland by a narrow isthmus of flat ground. This is nearly covered at one part at high spring tides, but the causeway and aqueduct are always above, though sometimes only just above, water. The highest peak on the wall of precipitous hills that surrounds the old crater which constitutes Aden is 1,775 feet above sea level. Rugged spurs, with valleys between, radiate from the centre to the circumference of the crater. A great gap has been rent by some volcanic disturbance on the sea surface of the circle of hills and this opens to the magnificent harbour. The peninsula of Little Aden, adjacent to Aden proper, was obtained by purchase in 1868 and the adjoining tract of Shalkh Othman, 39 square miles in extent, was subsequently purchased when, in 1882, it was found necessary to make provision for an over-flowing population.

Attached to the settlement of Aden are the islands of Perim, an island of 5 square miles extent in the Straits of Bab-el-Mandeb, in the entrance to the Arabian Sea; Sokotra island, at the entrance to the Gulf of Aden, in the Arabian Sea, acquired by treaty in 1886 and 1,382 miles in extent; and the five small Kuria Muria islands, ceded by the Imam of Maskat in 1854 for the purpose of landing the Red Sea cable, and otherwise valuable only for the guano deposits found upon them. They are off the Arabian coast about two-thirds of the way from Aden to Maskat. The whole extent of the Aden settlement, including Aden, Little Aden, Shalkh Othman and Perim is approximately 80 miles. The 1911 census shows Aden, with Little Aden, Shalkh Othman, and Perim to have a population of 48,165. The population of Perim is a matter of a few hundreds, largely dependent on the Coal Depot maintained there by a commercial firm. That of Sokotra is 12,000, mostly pastoral and migratory inland, fishing on the coast.

### Strategic Importance.

Aden's first importance is as a naval and military station of strategic importance. This aspect was ably discussed by Colonel A. M. Murray, in his "Imperial Outposts." He points out that Aden is not a naval base in the same sense that Gibraltar, Malta and Hong Kong were made, but a *point d'appui*, a rendezvous and striking point for the fleet. It was seized in 1839 because of its usefulness as a harbour of refuge for British ships and from a strategist's point of view this is its primary purpose and the *raison d'être* of its forts and garrison. Aden

under British rule has retained its ancient prestige as a fortress of impregnable strength, invulnerable by sea and by land, dominating the entrance to the Red Sea, and valuable to its owners as a commercial emporium, a port of call and a cable centre. The harbour extends 8 miles from east to west and 4 from north to south and is divided into two bays by a spit of land. The depth of water in the western bay is from 3 to 4 fathoms, across the entrance 4½ to 5 fathoms, with 10 to 12 fathoms 2 miles outside. The bottom is sand and mud. There are several islands in the inner bay. Strategic control of the Red Sea was rendered complete by the annexation of Perim and Sokotra, which may both be regarded as outposts of Aden, and are under the political jurisdiction of the Resident.

The Arab chiefs of the hinterland of Arabia are nearly all stipendiaries of the British Government. Colonel Wahab and Mr. G. H. Fitzmaurice, of the Constantinople Embassy, were appointed in 1902 as Commissioners to delimitate the frontier between Turkish Arabia and the British protectorate around Aden. A convention was signed in 1905 settling details, the frontier line being drawn from Shalkh Murad, a point on the Red Sea coast opposite Perim, to the bank of the river Bana, the eastern limit of Turkish claims, at a point some 29 miles north-east of Dthala, and thence north-east to the great desert. The area left within the British Protectorate was about 9,000 square miles. The arrangement gave to Turkey Cape Bab-el Mandeb, which forms the Arabian bank of the eastern channel past Perim into the Red Sea. England took this gatepost of the Red Sea from the Turks in November 1914. A sanatorium and small British garrison used to be maintained at Dthala, which is 7,700 feet high, but the garrison was withdrawn in 1906, Lord Morley explaining this step as being in accordance with the policy stated in the House of Lords in 1903,—that His Majesty's Government had never desired to interfere with the internal and domestic affairs of the tribes on the British side of the boundary, but had throughout made it plain that they would not assent to the interference of any other Power with those affairs. Affairs in this respect have been disarranged considerably by the war.

### British Policy.

There has been much criticism of a policy under which Aden has failed to advance with the same progressive strides which have marked the development of other British dependencies. It is said that the former Persian possessors of Aden built its wonderful water tanks, and the Arabs made an aqueduct 20 miles long, while the British have done nothing except mount guns to protect their coal yards. Trade, it is argued, flourishes because this is a natural emporium of commerce, but not because of the attention its needs get from Government. Lord Roberts, writing on this point a few years ago said: "It is not creditable to British rule to make use of a dependency like Aden for selfish purposes of political necessity without attempting to extend the benefits of civilised Government to the neighbouring native tribes, especially when those tribes are living under the aegis of the British Crown. The Persians, the



Turks and even the Arabs did more for Aden in their time than we have done during our seventy years' occupation..... Aden has always suffered under the disadvantage of being an appanage of the Bombay Presidency, with which it has neither geographical, racial nor political affinity. Probably the best solution of the matter would be to hand over the place to the Colonial Office, relieving the Government of Bombay of a charge which is only looked upon as an incubus." Some important steps have been taken in the past few years to satisfy the commercial needs of the port.

### Trade.

The trade of Aden has developed immensely since British acquisition in 1839, largely through the Government of India declaring it a free port in 1850, since when it has attracted much of the valuable trade between Arabia and Africa, formerly monopolised by the Red Sea ports of Hodeida and Mokha. The opening of the Suez Canal was also responsible for a large increase of trade through Aden into the interior. The total imports by sea in the last official year (1913-14) before the war set the course of progress awry amounted to £3,756,964; by land £170,213; treasure, £450,305; exports by sea were £3,267,243; by land, £140,159; treasure, £741,687. These statistics are exclusive of Government stores and treasure. In 1914-15, the last year for which figures have yet been published the total trade of the port showed a dictum of £1,587,002—for ign trade decreased from £6,620,576 to £5,162,470 India trade from £1,583,791 to £1,519,155 and land trade from £222,241 to £257,984.

The language of the settlement is Arabic, but several other Asiatic tongues are spoken. The population is chiefly returned as Arabs and Shalkha. The Somalis from the African coast and Arabs do the hard labour of the port. So far as the settlement is concerned there are no products whatever, with the important exception of salt. The crops of the tribal low country adjoining are jowar, sesamum, a little cotton, madder, a bastard saffron and a little indigo. In the hills, wheat, madder, fruit, coffee and a considerable quantity of wax and honey are obtained. The water supply forms the most important problem. Water is drawn from four sources—wells, aqueducts, tanks or reservoirs and condensers.

### Administration.

The Aden settlement is subject politically to the Government of Bombay and its administration is conducted by a Resident, who is assisted by four Assistants. The Resident is also military Commandant and is usually an officer selected from the Indian army, as are his assistants. The Resident has jurisdiction as a Judge of the Vice-Admiralty Court in matters connected with slave trading, his court being called the Colonial Court of the Admiralty. The laws in force in the settlement are generally speaking those in force in the Bombay Presidency, supplemented on certain points by special regulations to suit local conditions. The management of the port is under the control of a Board of Trustees formed in 1888. The principal busi-

ness of the Port Trust has been the deepening of the harbour, so as to allow vessels of all sizes to enter and leave at all states of the tide. The Aden police force numbers slightly over 200 men. There are hospitals and dispensaries in both Aden and Perim, in addition to the military institutions of this character. The garrison comprises a troop of engineers, three companies of garrison artillery, one battalion of British Infantry, two companies of sappers and miners and one Indian regiment. Detachments from the last named are maintained at Perim and Shaikh Othman respectively.

The average temperature of the station is 87 degrees in the shade, the mean range being from 75 in January to 98 in June, with variations up to 102. The hails between the monsoons, in May and September are very oppressive. Consequently, long residence impairs the faculties and undermines the constitution of Europeans and even Indians suffer from the effects of too long an abode in the settlement, and troops are not posted in the station for long periods, being usually sent there one year and relieved the next. But Aden is exceptionally free from infectious diseases and epidemics, and the absence of vegetation, the dryness of the soil and the purity of the drinking water constitute efficient safeguards against many maladies common to tropical countries. The annual rainfall varies from  $\frac{1}{2}$  inch to 8 $\frac{1}{2}$  inches, with an irregular average of 3 inches.

At the outset of the war the Turks established themselves on the Arabian shore of the straits of Bah-el-Mandeb. They were driven off, their fort captured and then guns taken, by a force landed from a British warship. But in July, 1915, a mixed force of Turks and Arabs advanced against the Aden Settlement. News was made known in India by a Reuter telegram of July 9th, which said that the Turks and Arabs threatened Lahaj, that at the request of the Sultan of Lahaj a force was sent for the protection of his capital, and that the supporting force was so beset with water and transport difficulties that it was decided to retire, and the whole force withdrew to Aden, the enemy declining to follow. Subsequently came an official intimation that the Sultan of Lahaj who had been grievously wounded in a fight against the raiding force had died in Aden whither he had been taken for surgical treatment. The Government of India announced on July 22nd that on the morning of the 21st instant a force from the Aden Garrison attacked the position taken by the Turks, a few miles outside the settlement, and drove them from it, the pursuit being continued for a distance of five miles. No further information on the matter has been made public.

The following are the principal officers of the present administration:—

*Political Resident*, Major-General James Marshall Stewart, C.B.

*Assistant Residents*, Major C. E. Barton (Perim), Lieut.-Colonel R. F. Jacob, Captain B. E. Kelly, Lieut.-Colonel W. Beale.

The area enclosed within the boundaries of India is 1,773,168 square miles, with a population of 315,132,537 of people—nearly one-fifth of the human race. But of this total a very large part is not under British Administration. The area covered in the Native States is 675,267 square miles with a population of seventy millions. The Native States embrace the wildest variety of country and jurisdiction. They vary in size from petty states like Lawa, in Rajputana, with an area of 19 square miles, and the Simla Hill States, which are little more than small holdings, to States like Hyderabad, as large as Italy, with a population of thirteen millions. They include the inhospitable regions of Western Rajputana, Baroda, part of the Garden of India, Mysore, rich in agricultural wealth, and Kashmir, one of the most favoured spots on the face of the globe. In the case of 175 States control is exercised by the Government of India, and of about 500 by the Provincial Governments. The four principal states, Hyderabad, Mysore, Baroda and Kashmir, are in direct relation with the Government of India. The other States are grouped under the direction of an Agent to the Governor-General, as for Rajputana and Central India; in one case the Provincial Government has been compelled to group its States, those of Kathlawar, under an Agent to the Governor.

## Relations with the Paramount Power.

So diverse are the conditions under which the Native States were established and came into political relation with the Government of India, that it is impossible even to summarise them. But broadly it may be said that as the British boundaries expanded, the states came under the influence of the Government and the rulers were confirmed in their possessions. To this general policy however there was, for a brief period, an important departure. During the regime of Lord Dalhousie the Government introduced what was called annexation through lapse. That is to say, when there was no direct heir, the Government considered whether public interests would be secured by granting the right of adoption. Through the application of this policy, the states of Satara and of Nagpur fell in to the East India Company, and the kingdom of Oudh was annexed because of the gross misgovernment of its rulers. Then came the Mutiny. It was followed by the transference of the dominions of the East India Company to the Crown, and an irrevocable declaration of policy toward the Native States. In the historic Proclamation of Queen Victoria it was set out that "We desire no extension of our present territorial possessions; and while we will permit no aggression on our dominions or our rights to be attempted with impunity, we shall allow no encroachments on those of others. We shall respect the rights, dignity and honour of the Native Princes as our own; and we desire that they, as well as our own subjects, should enjoy that prosperity and that social advancement which can only be secured by internal peace and good government." Since the issue of that proclamation there has been no encroachment on the area under Native rule by the Government of India. On the contrary, the movement has been in the op-

posite direction. In 1881 the State of Mysore, which had been so long under British administration that the traditions of Native rule were almost forgotten, was restored to the old Hindu ruling house. In 1911 the Maharajah of Benares, the great taluqdar of Oudh, was granted ruling powers over his extensive possessions. On many occasions the Government of India has had to intervene, to prevent gross misgovernment, or to carry on the administration during a long minority; but always with the undeviating intention of restoring the territories as soon as the necessity for intervention passed. Almost all states possess the right of adoption in default of heirs.

## Rights of Native States.

The rights and obligations of the Native States are thus described by the Imperial Gazetteer. The Chiefs have, without exception, gained protection against dangers from without and a guarantee that the protector will respect their rights as rulers. The Paramount Power acts for them in relation to foreign Powers and other Native States. The inhabitants of the Native States are the subjects of their rulers, and except in case of personal jurisdiction over British subjects, these rulers and their subjects are free from the control of the laws of British India. Criminals escaping to a Native State must be handed over to it by its authorities; they cannot be arrested by the police of British India without the permission of the ruler of the State. The Native Princes have therefore a suzerain power which acts for them in all external affairs, and at the same time scrupulously respects their internal authority. The suzerain also intervenes when the internal peace of their territories is seriously threatened. Finally they participate in all the benefits which the protecting power obtains by its diplomatic action, or by its administration of its own dominions, and thus secure a share in the commerce, the railways, the ports, and the markets of British India. Except in rare cases, applied to maritime states, they have freedom of trade with British India although they levy their own customs, and their subjects are admitted to most of the public offices of the British Government.

## Obligations of Native States.

On the other hand the Native States are under an obligation not to enter into relations with foreign nations or other states; the authority of their rulers has no existence outside their territories. Their subjects outside their dominions become for all intents and purposes British subjects. Where foreign interests are concerned, the Paramount Power must act so that no just cause of offence is given by its subordinate allies. All Native States alike are under an obligation to refer to the British every question of dispute with other states. Inasmuch as the Native States have no use for a military establishment other than for police, or display, or for co-operation with the Imperial Government, their military forces, their equipment and armament are prescribed by the Paramount Power. Although old and unaltered treaties declare that the British Government will have no manner of concern with any of a Maharajah's dependents or servants, with respect to whom the Maharajah is absolute, logic and public opinion

have endorsed the principle which Lord Canning set forth in his minute of 1860, that the "Government of India is not precluded from stepping in to set right such serious abuses in a Native Government as may threaten any part of the country with anarchy or disturbance, nor from assuming temporary charge of a Native State when there shall be sufficient reason to do so." Of this necessity the Governor-General in Council is the sole judge, subject to the control of Parliament. Where the law of British India confers jurisdiction over British subjects or other specified persons in foreign territory, that power is exercised by the British courts which possess it. The subjects of European Powers and the United States are on the same footing. Where cantonments exist in Native territory, jurisdiction both over the cantonment and the civil station is exercised by the suzerain power.

#### Political Officers.

The powers of the British Government are exercised through Political Officers who as a rule reside in the states themselves. In the larger states the Government is represented by a Resident, in groups of states by an Agent to the Governor-General, assisted by local Residents or Political Agents. These officers form the sole channel of communication between the Native States and the Government of India and its Foreign Department, with the officials of British India and with other Native States. They are expected to advise and assist the Ruling Chiefs in any administrative or other matters on which they may be consulted. Political Agents are similarly employed in the larger States under the Provincial Governments, but in the petty states scattered over British India the duties of the Agent are usually entrusted to the Collector or Commissioner in whose district they lie. All questions relating to the Native States are under the special supervision of the Supreme Government, and in the personal charge of the Governor-General. A proposal has been made by the Government of India that, in view of the increasing importance of the Native States, an additional Secretary, styled the Political Secretary, shall be appointed who shall be in special charge, under the Viceroy, of these questions.

#### Closer Partnership.

Events have tended gradually to draw the Paramount Power and the Native States into closer harmony. Special care has been devoted to the education of the sons of Ruling Chiefs, first by the employment of tutors, and afterwards by the establishment of special colleges for the purpose. These are now established at Ajmere, Rajkot, Indore and Lahore. The Imperial Cadet Corps whose headquarters are at Dehra Dun, imparts military training to the scions of the ruling chiefs and

noble families. The spread of higher education has placed at the disposal of the Native States the products of the Universities. In these ways there has been a steady rise in the character of the administration of the Native States, approximating more closely to the British ideal. Most of the Native States have also come forward to bear their share in the burden of Imperial defence. Following on the spontaneous offer of military assistance when war with Russia appeared to be inevitable over the Peshawar incident in 1885, the states have raised a portion of their forces up to the standard of the Native troops in the Indian Army. These are termed Imperial Service Troops; they belong to the states, they are officered by Indians; but they are inspected by a regular cadre of British officers, under the general direction of the Inspector-General of Imperial Service Troops. Their numbers are approximately 22,000 men; their armament is the same as that of the Indian Army and they have done good service often under their own Chiefs, on the Frontier and in China and in Somaliland. Secure in the knowledge that the Paramount Power will respect their rights and privileges, the Ruling Chiefs have lost the suspicion which was common when their position was less assured, and the visits of the Prince of Wales in 1875, of the Prince and Princess of Wales in 1905-06, and of the King and Queen in 1911-12 have tended to seal the devotion of the great feudatories to the Crown. The improvement in the standard of native rule has also permitted the Government of India largely to reduce the degree of interference in the internal affairs of the Native States. The new policy was authoritatively laid down by Lord Minto, the then Viceroy, in a speech at Udaipur in 1909, when he said:—

"Our policy is with rare exceptions, one of non-interference in the internal affairs of the Native State. But in guaranteeing their internal independence and in undertaking their protection against external aggression it naturally follows that the Imperial Government has assumed a certain degree of responsibility for the general soundness of their administration and could not consent to incur the reproach of being an indirect instrument of misrule. There are also certain matters in which it is necessary for the Government of India to safeguard the interests of the community as a whole as well as those of the paramount power, such as railways, telegraphs and other services of an Imperial character. But the relationship of the Supreme Government to the State is one of suzerainty. The foundation-stone of the whole system is the recognition of identity of interests between the Imperial Government and Durbars and the minimum of interference with the latter in their own affairs."

### HYDERABAD.

Hyderabad, the premier Native State in India, is in the Deccan. Its area is 82,698 square miles and population 13,374,676. The general physical characteristics of the State are an elevated plateau, divided geographically and ethnologically by the Manjira and Godavari rivers. To the North-West is the Trappan region, peopled by Marathas, a country of black cotton soil, producing wheat and cotton. To the South-East

is the granitic region of the Telugus and producing rice.

**HISTORY.**—In pre-historic times Hyderabad came within the great Dravidian zone. The date of the Aryan conquest is obscure, but the dominions of Asoka 272 to 231 B.C. embraced the northern and western portions of the State. Three great Hindu dynasties followed, those of the Pallavas, Chalukyas and Yadavas. In

1294 the irruption of the Mahomedans under Ala-ud-din Khilji, commenced, and thenceforward till the time of Aurungzebe the history of the State is a confused story of struggles against the surviving Hindu kingdom of the South, and after the fall of Vijayanagar, with each other. Aurungzebe stamped out the remains of Mahomedan independence of the South, and set up his General, Asaf Jah, of Turcoman descent, as Viceroy, or Subhadar of the Deccan in 1713. In the chaos which followed the death of Aurungzebe, Asaf Jah had no difficulty in establishing and maintaining his independence, and thus founded the present House. During the struggle between the British and the French for mastery in India, the Nizam finally threw in his lot with the British, and unshaken even by the excitement of the mutiny, has been so staunch to his engagements as to earn the title of "Our Faithful Ally." The present ruler is H. H. Sir Usman Ali Khan Bahadur Fateh Jung, G.C.S.I.

**THE BERARS.**—A most important event in the history of the State occurred in November 1902, when the Assigned Districts of Berar were leased in perpetuity to the British Government. These districts had been administered by the British Government on behalf of the Nizam since 1853; under the treaties of 1853 and 1860, they were "assigned" without limit of time to the British Government to provide for the maintenance of the Hyderabad contingent, a body of troops kept by the British Government for the Nizam's use, the surplus revenues, if any, being payable to the Nizam. In course of time it had become apparent that the maintenance of the Hyderabad contingent on its old footing as a separate force was inexpedient and unnecessary, and that similarly the administration of Berar as a separate unit was very costly, while from the point of view of the Nizam, the precarious and fluctuating nature of the surplus was financially inconvenient. The agreement of 1902 re-affirmed His Highness' sovereignty over Berar, which instead of being indefinitely "assigned" to the Government of India, was leased in perpetuity to an annual rental of 25 lakhs (nearly £167,000); the rental is for the present charged with an annual debt towards the repayment of loans made by the Government of India. The Government of India were at the same time authorised to administer Berar in such manner as they might think desirable, and to redistribute, reduce, re-organise and control the Hyderabad Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness' dominions. In accordance with this agreement the Contingent ceased in March 1903 to be a separate force and was re-organised and redistributed as an integral part of the Indian Army, and in October 1903 Berar was transferred to the administration of the Chief Commissioner of the Central Provinces.

**ADMINISTRATION.**—The Nizam is supreme in the State and exercises the power of life and death over his subjects. For convenience in administration the Minister is the chief controlling authority in the State. To assist him there are four Assistant Ministers, Financial and Public Works, Judicial, Military and Ecclesiastical. All questions of importance are referred to the Council, which is composed of the Minister as

President, and the Assistant Ministers as Members. Business disposed of by the Council is immediately reported to the Nizam. The actual work of the departments is done by six Secretaries. Below the Secretariat the State is divided into Subhas or Divisions, Districts and Talukas. Fifteen District, 88 Taluk and nine Divisional Boards are at work in the District. A Legislative Council, consisting of 23 members, of whom 12 are official and 11 non-official, is responsible for making laws. The State maintains its own currency, the Osmania Sica rupee with a subordinate coinage. In 1904 an improved Mahbubia rupee was struck and this exchanges with the British rupee at the ratio of 115 or 116 to 100. It has its own postal system and stamps for internal purposes. It maintains its own Army, comprising 17,347 troops, of which 5,980 are classed as Regular and 11,367 as Irregular. There are in addition 1,271 Imperial Service Troops.

**FINANCE.**—After many vicissitudes, the financial position of the State is strong. The current budget provides for a revenue of Rs. 605 lakhs and a service expenditure of Rs. 520 lakhs. The principal revenue heads are Land Revenue 293 lakhs, Berar rent (and leased in perpetuity to the British Government and incorporated in the Central Provinces) 25 lakhs; Customs, etc., 70 lakhs; Excise 102 lakhs; Interest 35 lakhs.

**PRODUCTION AND INDUSTRY.**—The principal industry of the State is agriculture, which maintains 57.1 per cent. of the population. The common system of land tenure is ryotwari. As no reliable figures are available to show the gross produce it is impossible to say what proportion the land revenue bears to it, but it is collected without difficulty. The principal food crops are millet and rice; the staple money crops cotton, which is grown extensively on the black cotton soils, and oil-seeds. The State is rich in minerals. The great Warangal coal measures are worked at Singareni, but the efforts to revive the historic gold and diamond mines have met with very qualified success. The manufacturing industries are consequent on the growth of cotton, and comprise three spinning and weaving mills and ginning and pressing factories in the cotton tracts.

**COMMUNICATIONS.**—One hundred and thirty-seven miles of the broad gauge line from Bombay to Madras traverse the State. At Wadi, on this section, the broad gauge system of the Nizam's Guaranteed State Railway takes off, running East to Warangal and South-East toward Bezwada, a total length of 330 miles. From Hyderabad the metre gauge Godavari Railway runs North-West to Manmad on the Great Indian Peninsula Company's system 391 miles. There are thus 471 miles of broad gauge and 391 of metre in the State. The Barsi Light Railway owns a short extension to Latur. The roads are generally inferior.

**EDUCATION.**—The State maintains two Colleges. The Nizam College at Hyderabad (first grade) is affiliated to the Madras University. The Oriental College at Hyderabad prepares students for the local Mouvi and Munsifi examinations. There are 21 high schools, 80 middle schools, 1,041 primary schools, and 23 special schools including a Medical School in the Dominions.

*British Resident*—Mr. S. M. Fraser, C.S.I., C.I.E.,

## MYSORE.

The State of Mysore is surrounded on all sides by the Madras Presidency except on the north and north-west where it is bounded by the districts of Dharwar and North Canara respectively and towards the south-west by Coorg. It is naturally divided into two regions of distinct character; the hill country (the Malnad) on the west and the wide-spreading valleys and plains (the Maldan) on the east. The State has an area of 29,461 square miles excluding that of the Civil and Military Station of Bangalore and a population of 5,705,359, of whom over 92 per cent. are Hindus. Kannarese is the distinctive language of the State.

**HISTORY.**—The ancient history of the country is varied and interesting. Tradition connects the table-land of Mysore with many a legend enshrined in the great Indian epics, the Ramayana and the Mahabharata. Coming down to historical times, the north-eastern portion of the country formed part of Asoka's Empire in the third century B. C. Mysore then came under the rule of the Andhra dynasty. From about the third to the eleventh century A. D. Mysore was ruled by three dynasties, the north-western portion by the Kadambas, the eastern and northern portions by the Pallavas and the central and southern portions by the Gangas. In the eleventh century, Mysore formed part of the Chola dominion, but the Cholas were driven out early in the twelfth century by the Hoysalas, an indigenous dynasty with its capital at Halebid. The Hoysala power came to an end in the early part of the fourteenth century. Mysore was next connected with the Vijayanagar Empire. At the end of the fourteenth century, Mysore became associated with the present ruling dynasty. At first tributary to the dominant empire of Vijayanagar, the dynasty attained its independence after its downfall in 1665. In the latter part of the eighteenth century the real sovereignty passed into the hands of Haldar Ali and then his son Tippu Sultan. In 1799, on the fall of Seringapatam, the British Government restored the State comprised within its present limits, to the ancient dynasty in the person of Maharaja Sri Krishnaraja Wadiyar Bahadur III. Owing to the insurrections that broke out in some parts of the country, the management was assumed by the British Government in 1831. In 1881 the State was restored to the dynasty in the person of Sri Chamarajendra Wadiyar Bahadur under conditions and stipulations laid down in the Instruments of Transfer. That ruler, with the assistance of Mr. (afterwards Sir) K. Seshadri Iyer, K.C.S.I., as Dewan, brought Mysore to a state of great prosperity. He died in 1894 and was succeeded by the present Maharaja Sir Sri Krishnaraja Wadiyar Bahadur, G.C.S.I., who was installed in 1902. In November 1913, the Instrument of Transfer was replaced by a Treaty which indicates more appropriately the relation subsisting between the British Government and the State of Mysore.

**ADMINISTRATION.**—The city of Mysore is the capital of the State, but Bangalore City is the administrative head quarters. His Highness the Maharaja is the ultimate authority in the State and the administration is conducted

under his control, by the Dewan and three Members of the Council including the Extraordinary Member. The Chief Court consisting of three Judges is the highest judicial tribunal in the State. A Representative Assembly meets once a year at Mysore when the Dewan places before them the annual statement of finances and the measures of the State after which representations are heard and considered. There is also a Legislative Council consisting of 25 members, of whom 12 are officials, and 13 non-officials, eight elected and five nominated. The Council has recently been given the privileges of interpellation and discussion of the State budget. All the important branches of the administration are controlled by separate heads of departments. For administrative purposes, the State is divided into 8 districts and subdivided into 68 talukas, each district being under a Deputy Commissioner and District Magistrate and each taluk under an Amildar and subordinate Magistrate. The State maintains a military force of 3,202 including 516 in the Imperial Service Regiment (Cavalry), which is on active service, and 480 in the Imperial Service Transport Corps.

The cash balance at the beginning of 1915-16 was 72 lakhs. Total receipts during the year were Rs. 285 lakhs and total disbursement 261 lakhs. The principal revenue heads are:—Land Revenue Rs. 105 lakhs; Mining Royalty and Leases Rs. 19 lakhs; Forest revenue Rs. 30 lakhs; Excise Rs. 55 lakhs; Stamps Rs. 11 lakhs; Railway Rs. 16 lakhs; and Electric Power Rs. 23 lakhs. Mysore pays an annual subsidy of Rs. 35 lakhs to the British Government.

**ECONOMIC CONFERENCES.**—The Mysore Economic Conference was organised in June 1911 with the object of creating and keeping alive public interest in matters connected with the economic progress of the State by a frequent interchange of views and discussions among those competent to deal with them and in order to associate men of enlightenment, public spirited citizens, prominent agriculturists, merchants and others with the officers of Government in such deliberations. The Conference meets annually at Mysore during the festivities in connection with His Highness the Maharaja's birthday. It has three Central Committees dealing with questions connected with Agriculture, Education and Industries and Commerce, District Committees in the several districts, and progress committees in talukas and towns.

**AGRICULTURE.**—Nearly three-fourths of the population are employed in agriculture and the general system of land tenure is Ryotwari. The principal food crops are ragi, rice, jola, millets, gram and sugarcane and the chief fibres are cotton and sun-hemp. Over 28,000 acres are under mulberry, the silk industry being the most profitable in Mysore next to gold mining. A Director of Sericulture has recently been appointed. The Department of Agriculture which was recently reorganised on a large scale is popularising agriculture on scientific lines by means of demonstrations, investigations and experiments.

**INDUSTRIES.**—A separate department of Industries and Commerce has been created

with a view to improve the existing industries and to provide expert advice and other facilities for the starting of new industries in the State. The manufacturing industries include 12 cotton ginning mills, 3 cotton presses, 2 cotton mills, 3 silk filatures and 2 woollen mills. There are also 4 oil mills, 11 rice mills, 9 sugar mills, 4 brick and tiles factories, 3 cigar factories, 3 tanneries, 15 mechanical workshops, 2 distilleries, 1 iron and steel works, 1 silk reeling house, 4 flour mills, 2 bone-meal factories, 3 coffee curing works, 3 dyeing factories, 2 hosiery, 1 brewery, 12 iron and brass foundries, 1 lacquer work, 2 taxidermic works, 4 saw mills, 1 weaving factory, 1 pharmaceutical works, 1 soap factory, 1 wood turning and 1 lithographic press. For purposes of experiment, a sandalwood oil factory and a soap factory have been started by Government. A button factory and a Home Industries Institute have also been sanctioned. In addition there are 38 pumping plants for irrigation. Besides, 30 mines were at work during 1914—15 for gold, 3 for manganese, 5 for chrome ore, 2 for mica and 5 for other minerals. The value of gold produced last year was nearly 324 lakhs. A Chamber of Commerce has recently been started.

**BANKING.**—In 1913, a State-aided bank called the Bank of Mysore was started with its head quarters in Bangalore and agencies at many of the important places in the State. Besides this there are two central Co-operative Banks and 15 Federal Banking Unions and 811 co-operative societies working.

**COMMUNICATIONS.**—The Railway system radiates from Bangalore, various branches of the Madras and Southern Mahratta Railway running through the State. The length of the lines owned by the State and worked under contract by the Company is 411·17 miles, of which 9·88 are of broad gauge and the rest metre gauge. A District Board Railway from Bowringpet to Kolar (11 miles) was opened in December 1913. A Light Railway from Yelahanka to Chikballapur and a Tramway from Tarikere to Narasimharajapura have also been opened. Several other projects have been prepared and good progress has been made on some of them.

**EDUCATION.**—A separate University for Mysore has been started from 1st July 1916.

The Mysore University is a federation of the Central College at Bangalore, and the Maharaja's College at Mysore, under a common Government with headquarters at Mysore. An important feature is that students will undergo a course of three years in the University, but they will be admitted to the University only after a year's training in collegiate High Schools. The two colleges are efficiently equipped and organised and there is a training college for men located at Mysore. There is also a college for women at Mysore, i.e., the Maharani's College.

With the introduction of compulsory education in select towns and the increase in the number of village schools, primary education has during recent years made considerable advance. Schools have been started for imparting instruction in agricultural, commercial, engineering and other technical subjects. Adult education and vocational training have also been taken in hand. There were altogether in 1914-15, 4,278 public and 1,859 private educational institutions in the State. This gives one school to every 4·89 square miles of the area and to every 980 inhabitants.

**PLACES OF INTEREST.**—Mysore City, the capital, is a modern city laid out with fine roads and suburbs. The prominent buildings are the Palace, the Chamarajendra Technical Institute, Government House, the Maharaja's College, the Maharani's College and the Oriental Library.

Bangalore, the largest city in the State and the commercial and manufacturing centre, stands on a table land, 3,000 feet above the sea and is noted for its salubrious climate and luxuriant gardens. The principal places of interest are the Public Offices, the Central College buildings, the Museum, the Lal Bagh, the Indian Institute of Science and the Indian Sanskrit Institute.

The historic town of Srirangapatna, the famous Jog Falls, the Kolar Gold Fields, the Sivanasudram Falls, and Belur, Somnathpur and Halebidu with their temples of exquisite architecture, are some of the other important places of interest in the State.

*Resident in Mysore and Chief Commissioner of Coorg.*—H. V. Cobb, C.S.I., C.I.E.,

*Deewan*—Sir M. Visveswaraya, B.A., K.C.I.E.

## BARODA.

The State of Baroda is situated partly in Gujarat and partly in Kathiawar. It is divided into four distinct blocks: (1) the southern district of Navsari near the mouth of the Tapti river, and mostly surrounded by British territory; (2) central district, North of the Narbada, in which lies Baroda, the capital city; (3) to the North of Ahmedabad, the district of Kadi; and (4) to the West, in the Peninsula of Kathiawar, the district of Amreli, formed of scattered tracts of land. The area of the State is 8,182 square miles; the population is over two millions, of whom over four-fifths are Hindus.

**HISTORY.**—The history of the Baroda State as such dates from the break-up of the Mughal Empire. The first Maratha invasion of Gujarat took place in 1705, and in this and later incursions Pilaji Gaikwar, who may be con-

sidered as the founder of the present ruling family, greatly distinguished himself. Songhad was the headquarters till 1766. Since 1723 Pilaji regularly levied tribute in Gujarat. His son Damaji finally captured Baroda in 1734, since when it has always been in the hands of the Gaikwars; but Mughal authority in Gujarat did not end until the fall of Ahmedabad in 1753, after which the country was divided between the Gaikwar and the Peshwa. In spite of the fact that Damaji was one of the Maratha chiefs defeated at Panipat by Ahmed Shah, he continued to add to his territory. He died in 1768 leaving the succession in dispute between two rival sons. He was succeeded in turn by his sons Savaji Rao I, Fatterising Rao, Manaji Rao and Goind Rao. The last died in 1800, and was succeeded by Anand Rao. A period of political instability

ensued which was ended in 1802 by the help of the Bombay Government, who established the authority of Anand Rao at Baroda. By a treaty of 1805 between the British Government and Baroda, it was arranged *inter alia* that the foreign policy of the State should be conducted by the British, and that all differences with the Peshwa should be similarly arranged. Baroda was a staunch ally of the British during the wars with Bajji Rao Peshwa, the Pindari hordes and Holkar. But from 1820 to 1841, when Sayaji Rao II. was Gaikwar, differences arose between the two Governments, which were settled by Sir James Carnac, Governor of Bombay in 1841. Ganpat Rao succeeded Sayaji Rao in 1847. During his rule, the political supervision of Baroda was transferred to the Supreme Government. His successor Khande Rao, who ascended the *Gadi* in 1856, introduced many reforms. He stood by the British in the Mutiny. He was succeeded by his brother Malhar Rao in 1870. Malhar Rao was deposed in 1875 for "notorious misconduct" and "gross misgovernment," but the suggestion that he had instigated the attempt to poison Col. Phayre, the Resident, was not proved. Sayaji Rao III., a boy of 13 years of age, who was descended from a distant branch of the family, was adopted as heir of Khande Rao in 1875 and is the present Gaikwar. He was invested with full powers in 1881.

**ADMINISTRATION.**—An executive council, consisting of the principal officers of the State, carries on the administration, subject to the control of the Maharaja, who is assisted by a Dewan and other officers. A number of departments have been formed, which are presided over by officials corresponding to those in British India. The State is divided into four *prants* each of which is subdivided into *Mahals* and *Peta Mahals* of which there are in all 42. Attempts have for some years been made to restore village autonomy, and village panchayats have been formed which form part of a scheme for local self-government. There is a Legislative Department, under a Legal Remembrancer, which is responsible for making laws. There is also a Legislative Council, consisting of nominated and elected members. A High Court at Baroda possesses jurisdiction over the whole of the State and hears all final appeals from the decisions of the High Court, appeals lie in certain cases, to the Maharaja, who decides them on the advice of the Huzur Nizaya Sabha. The State Army consists of 5,084 Regular forces and 3,806 Irregular forces.

**FINANCE.**—In 1914-15, the total receipts of the State were Rs. 192 lakhs and the disbursements Rs. 148 lakhs. The principal Revenue

heads were:—Land Revenue, Rs. 110 lakhs; Akbari, Rs. 19 lakhs; Opium, Rs. 15 lakhs; Railways, Rs. 8 lakhs; Interest Rs. 7 lakhs; Tribute from other States, Rs. 6 lakhs. British Currency was introduced in 1901.

**PRODUCTION AND INDUSTRY.**—Agriculture and pasture support 63 per cent. of the people. The principal crops are rice, wheat, gram, castor-oil, rapeseed, poppy, cotton, san-hemp, tobacco, sugarcane, maize, and garden crops. The greater part of the State is held on *ryotwari* tenure. The State contains few minerals, except sandstone, which is quarried at Songir, and a variety of other stones which are little worked. There are 34 industrial or commercial concerns in the State registered under the State Companies' Act. There are four Agricultural Banks and 307 Co-operative Societies in Baroda.

**COMMUNICATIONS.**—The B. B. & C. I. Railway crosses part of the Navsari and Baroda *prants*, and the Rajputana-Malwa Railway passes through the Kadi *prant*. A system of branch lines has been built by the Baroda Durbar in all the four *prants*, in addition to which the Lapti Valley Railway and the Baroda-Godhra Chord line (B. B. & C. I.) pass through the State. The Railways constructed by the State are 486 miles in length and 143 miles are under construction. Good roads are not numerous.

**EDUCATION.**—The Education Department controls 3,141 institutions of different kinds, in 65 of which English is taught. The Baroda College is affiliated to the Bombay University. There are a number of high schools, technical schools, and schools for special classes, such as the jungle tribes and unclean castes. The State is "in a way pledged to the policy of free and compulsory primary education." It maintains a system of rural and travelling libraries. Ten per cent. of the population is returned in the census as literate. Total expense on Education is about Rs. 18 lakhs.

**CAPITAL CITY.**—Baroda City with the cantonment has a population of 99,345. It contains a public park, a number of fine public buildings, palaces and offices; and it is crowded with Hindu temples. The cantonment is to the North-west of the city and is garrisoned by an infantry battalion of the Indian Army. An Improvement Trust has been formed to work in Baroda City and has set itself an ambitious programme.

**RULER.**—His Highness Farzand-i-Khas-i-Dowlat-i-Inglishia Maharaja Sir Sayaji Rao Gaekwar Sena Khas Khel, Samsher Bahadur, G.C.S.I., Maharaja of Baroda.

*Resident*—Lt.-Col. L. Impey, C.I.E.

*Acting Dewan*—Manubhai N. Mehta.

## BALUCHISTAN AGENCY.

In this Agency are included the Native States of Kalat, Kharan and Las Bela. The Khan of Kalat is head of the Baluchistan tribal chiefs whose territories are comprised under the following divisions:—Jhalawan, Sarawan, Makran, Kachhi and Domki-Kaheri-Umrani. These districts form what may be termed Kalati Baluchistan, and occupy an area of 54,713 square miles. The inhabitants of the country are either Brahuis or Baluchis, both being

Mahomedans of the Sunni sect. The country is sparsely populated, the total number being about 336,423. It derives its chief importance from its position with regard to Afghanistan on the north-western frontier of British India. The relations of Kalat with the British Government are governed by two treaties of 1854 and 1876, by the latter of which the Khan agreed to act in subordinate co-operation with the British Government. There are,

however, agreements with Kalat in connection with the construction of the Indo-European telegraph, the cession of jurisdiction on the railways and in the Bolan Pass, and the permanent lease of Quetta, Nushki and Nasirabad. The Khan is assisted in the administration of the State by a Political Adviser lent by the British Government. The Governor-General's Agent in Baluchistan conducts the relations between the Government of India and the Khan, and exercises his general political supervision over the district. The revenue of the State is about Rs.10,47,214. The present Khan is, His Highness Mir Sir Mahmud Khan of Kalat, G.C.I.E. He was born in 1864.

Kharan extends in a westerly and south-westerly direction from near Nushki and Kalat to the Persian border. Its area is 18,565 square miles, it has a population of 22,863 and an annual average revenue of about Rs. 90,000.

The Chief of Kharan, Sardar Sir Nauroz Khan, K.C.I.E., died in June 1909, and was succeeded by his son, Sardar Yakub Khan. The attitude of the new chief towards Government, and his administration generally were

unsatisfactory. In 1911, he was murdered by the sepoys of his guard. Some trouble was caused by an uncle of the murdered chief, who declared himself Chief, but the Government of India finally recognised the succession of a son, Mir Habibulla Khan, and approved measures for the administration of the State during his minority.

Las Bela is a small State occupying the valley and delta of the Purul river, about 50 miles west of the Sind boundary. Area 7,132 square miles; population 61,205, chiefly Sunni Mahomedans, estimated revenue about Rs. 3,26,256. The Chief of Las Bela, known as the Jam, is bound by agreement with the British Government to conduct the administration of his State in accordance with the advice of the Governor-General's Agent. This control is exercised through the Political Agent in Kalat. The Jam also employs an approved Wazir, to whose advice he is subject and who generally assists him in the transaction of State business.

Agent to the Governor-General for Baluchistan:—Lieut.-Col. Sir John Ramsay, K.C.I.E. C.S.I.

### RAJPUTANA AGENCY.

Rajputana is the name of a great territorial circle with a total area of about 130,462 square miles, which includes 18 Native States, two chiefships, and the small British province of Ajmer-Merwara. It is bounded on the west by Sind, on the north-west by the Punjab State of Bahawalpur, on the north and north-east by the Punjab, on the east by the United Provinces and Gwalior, while the southern boundary runs across the central region of India in an irregular zig-zag line. Of the Native States 17 are Rajput, 2 (Bharatpur and Dholpur) are Jat, and one (Tonk) is Mahomedan. The chief administrative control of the British district is vested *ex-officio* in the political officer, who holds the post of Governor-General's Agent for the supervision of the relations between the several Native States of Rajputana and the Government of India. For administrative purposes they are divided into the following groups:—Alwar Agency; Bikanir Agency, Eastern Rajputana Agency, 3 States (Bharatpur, Dholpur, Karauli); Haroti and Tonk Agency, 3 States (principal States Bundi and Tonk); Jaipur Residency, 3 States (principal State, Jaipur); Kotah and Jhalawar Agency, 2 States; Mewar Residency; Southern Rajputana States Agency, 4 States (principal State, Banswara); Western Rajputana States Agency; 3 States (principal States, Marwar and Sirohi).

The Aravalli Hills intersect the country almost from end to end. The tract to the north-west of the hills is, as a whole, sandy, ill-watered and unproductive, but improves gradually from being a mere desert in the far west to comparatively fertile lands to the north-east. To the south-east on the Aravalli Hills lie higher and more fertile regions which contain extensive hill ranges and which are traversed by considerable rivers.

COMMUNICATIONS.—The total length of railways in Rajputana is 1,576 miles, of which 739 are the property of the British Government. The Rajputana-Malwa (Government) runs from Ahmedabad to Bandikui and from there bran-

ches to Agra and Delhi. Of the Native State railways the most important is the Jodhpur-Bikaner line from Marwar Junction to Hyderabad (Sind) and to Bikaner.

INHABITANTS.—Over 50 per cent. of the population are engaged in some form of agriculture; about 20 per cent. of the total population are maintained by the preparation and supply of material substances; personal and domestic service provides employment for about 5 per cent. and commerce for 2½ per cent. of the population. The principal language is Rajasthani. Among castes and tribes, the most numerous are the Brahmins, Jats, Mahajans, Chamars, Rajputs, Minas, Gujars, Bhils, Malis, and Balais. The Rajputs are, of course, the aristocracy of the country, and as such hold the land to a very large extent, either as receivers of rent or as cultivators. By reason of their position as integral families of pure descent, as a landed nobility, and as the kinsmen of ruling chiefs, they are also the aristocracy of India; and their social prestige may be measured by observing that there is hardly a tribe or clan (as distinguished from a caste) in India which does not claim descent from, or irregular connection with, one of these Rajput stocks.

The population and area of the States are as follows:—

Name of State.	Area in square miles.	Population in 1911.
<i>Mewar Residency—</i>		
Udaipur .. ..	12,958	1,293,776
Banswara .. ..	1,946	165,463
Dungarpur .. ..	1,447	159,192
Partabgarh .. ..	886	62,704
<i>Western States Residency—</i>		
Jodhpur .. ..	34,963	2,057,553
Jaisalmer .. ..	16,062	86,311
Sirohi .. ..	1,964	189,127



Name of State.	Area in square miles.	Population in 1911.
<b>Jaipur Residency—</b>		
Jaipur .. ..	15,579	2,636,674
Kishangarh .. ..	358	87,191
Lawa .. ..	19	2,564
<b>Harooh-Tonk Agency—</b>		
Bundi .. ..	2,220	218,730
Tonk .. ..	1,114	303,181
Shahpura .. ..	405	47,397
<b>Eastern States Agency—</b>		
Bharatpur .. ..	1,982	626,665
Dholpur .. ..	1,155	270,973
Karauli .. ..	1,242	156,786
<b>Kotah-Jhalawar Agency—</b>		
Kotah .. ..	5,684	639,089
Jhalawar .. ..	810	96,271
Bikaner .. ..	23,311	700,983
Alwar .. ..	3,141	791,688

**Udaipur State**, (also called Meywar) was founded in about 1559. The capital city is Udaipur, which is beautifully situated on the slope of a low ridge, the summit of which is crowned by the Maharajah's palace, and to the north and west, houses extend to the banks of a beautiful piece of water known as the Pichola Lake in the middle of which stand two island palaces. It is situated near the terminus of the Udaipur-Chitor Railway, 697 miles north of Bombay. The present ruler is His Highness Maharajadhiraj Maharana Sir Fateh Singh Bahadur, G.S.S.I., G.C.I.E., who was born in 1849 and succeeded in 1884. He is the head of the Seesodia Rajputs. The administration is carried on by the Maharana, assisted by two ministerial officers who form the chief executive department in the State. The revenue and expenditure of the State are now about 20 and 28 lakhs a year respectively. Udaipur is rich in minerals which are little worked. Its archaeological remains are numerous, and stone inscriptions dating from the third century have been found.

**Banswara State**, the southernmost in Rajputana, became a separate State about 1627. Towards the end of the eighteenth century Banswara became more or less subject to the Marathas, and paid tribute to the Raja of Dhar. In 1812 the Maharawal offered to become tributary to the British Government on condition of the expulsion of the Marathas, but no definite relations were formed with him till the end of 1818. The present ruler is His Highness Maharawal Sri Prithi Singh Bahadur, who was born in 1888 and succeeded his father in 1913. The normal revenue is about 4 lakhs and the expenditure about 3 lakhs. The area of the State is 1,946 square miles, and the population 187,468.

**Dongarpur State**, with Banswara, formerly comprised the country called the Pagar. It was invaded by the Mahrattas in 1818. As in other States, inhabited by hill tribes, it became necessary at an early period of British supremacy to employ a military force to coerce the Bhills. The State represents the Gaddi of the eldest branch of the Sisodiyas and dates its separate existence from about the close of the 12th Century, when

Mahup, the rightful heir to the Chittor throne, migrated to these parts. The present Chief is His Highness Rai Rayan Maharawal Shri Sir Bijaysinghji Sahab Bahadur, K. C. I. E., born in 1887 and succeeded in 1898. During his minority the State was administered by a Political Officer, a Chief Executive Officer and a Consultative Council of two. No railway line crosses the territory, the nearest railway station, Udaipur, being 60 miles distant. Revenue about 3 lakhs.

**Parthabgarh State**, also called the Kanthal, was founded in the sixteenth century by a descendant of Rana Mokul of Mewar. The town of Parthabgarh was founded in 1698 by Parthab Singh. In the time of Jaswant Singh (1775-1844), the country was overrun by the Marathas, and the Maharawat only saved his State by agreeing to pay Holkar a tribute of *Satm Shahi* Rs. 72,000, (which then being coined in the State Mint was legal tender throughout the surrounding Native States) in lieu of Rs. 15,000 formerly paid to Delhi. The first connexion of the State with the British Government was formed in 1804; but the treaty then entered into was subsequently cancelled by Lord Cornwallis, and a fresh treaty, by which the State was taken under protection, was made in 1818. The tribute to Holkar is paid through the British Government, and in 1904 was converted to Rs. 30,350 British currency. The present ruler is His Highness Maharawat Sir Raghunath Singh Bahadur, K.C.I.E., who was born in 1859 and succeeded in 1890. The State is governed by the Maharawal with the help of a Minister, and, in judicial matters, of a Committee of eleven members styled the Raj Sabha or State Council. Revenue about 4 lakhs; expenditure nearly 3½ lakhs. The financial administration is now under the direct supervision of the State.

**Jodhpur State**, the largest in Rajputana, also called Marwar, consists largely of desolate, sandy country. The Maharaja of Jodhpur is the head of the Rathor Clan of Rajputs and claims descent from Rama the deified king of Ajodhya. The earliest known king of the clan lived in the sixth century from which time onwards their history is fairly clear. The foundation of Jodhpur dates from about 1212, and the foundations of Jodhpur City were laid in 1459 by Rao Jodha. The State came under British protection in 1818. In 1839 the British Government had to interfere owing to misrule, and the same thing occurred again in 1868. Jaswant Singh succeeded in 1873 and reformed the State. His son Sardar Singh was invested with powers in 1898, the minority rule having been carried on by his uncle Maharaja Sir Pratap Singh. He died in 1911 and was succeeded by his eldest son Maharaja Sumer Singh Bahadur, who was then 14 years of age. The administration of the State was carried on by a Council of Regency appointed by the Government, presided over by Major-General Maharaja Sir Pratap Singh, who abdicated the Gadi of Idar to carry on as Regent the reforms in Jodhpur which he had begun in the time of his nephew Maharaja Sir Sardar Singh Bahadur. On the outbreak of the European War both the Maharaja and the Regent offered their services and were allowed to proceed to the Front. The young Maharaja was, for his services at the

Front, honoured with an Honorary Lieutenantship in the British Army, and was invested with full ruling powers in 1916 when the Regency terminated. Revenue 80 lakhs; expenditure 50 lakhs.

**Jaisalmer State** is almost entirely a sandy waste forming part of the great Indian Desert. The Chiefs of Jaisalmer belong to the Jadonlan and claim descent from Krishna. Jaisalmer City was founded in 1156, and the State was taken under British protection in 1818. In 1844, after the British conquest of Sind the forts of Shahgarh, Garsia, and Ghotaru, which had formerly belonged to Jaisalmer, were restored to the State. The present Chief is His Highness Maharajahdhiraja Maharawal Shri Jawaharsinghji Bahadur. Revenue about four lakhs.

**Sirohi State** is much broken up by hills of which the main feature is Mount Abu, 5,650 feet. The Chiefs of Sirohi are Deora Rajputs, a branch of the famous Chauhan clan which furnished the last Hindu kings of Delhi. The present capital of Sirohi was built in 1425. The city suffered in the eighteenth century from the wars with Jodhpur and the depredations of wild Mina tribes. Jodhpur claimed suzerainty over Sirohi but this was disallowed and British protection was granted in 1853. The present ruler is His Highness Maharajah Dhiraj Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.I.E. The State is ruled by the Maharao with the assistance of a Diwan and other officials. Revenue about 7 lakhs; expenditure 6 lakhs.

**Jaipur State** is the fourth largest in Rajputana. It consists, for the most part, of level and open country. The Maharaja of Jaipur is the head of the Kachwaha clan of Rajputs, which claims descent from Kusa, the son of Rama, king of Ajodhya, and the hero of the famous epic poem the Ramayana. The dynasty in Eastern Rajputana dates from about the middle of the twelfth century, when Amber was made the capital of a small State. The Chiefs of that State acquired fame as generals under the Mughals in later centuries, one of the best known being Sawai Jai Singh in the eighteenth century who was remarkable for his scientific knowledge and skill. It was he who moved the capital from Amber and built the present city of Jaipur and elevated the State above the principalities around. On his death a part of the State was annexed by the Jats of Bharatpur and internal disputes brought Jaipur to great confusion. British protection was extended to Jaipur in 1818, but the State continued to be disturbed and a Council of Regency was appointed, which governed up to 1851, when Maharaja Ram Singh assumed full powers. He nominated as his successor Kaim Singh who succeeded in 1880, under the name of Sawai Madho Singh II, and is the present ruler. He was born in 1861, and, in consideration of his youth, the administration was at first conducted by a Council under the joint presidency of the Maharaja and the Political Agent. He was invested with full powers in 1882. In 1887, his salute was raised from 17 to 19 guns as a personal distinction, followed in 1896 by two additional guns. In 1888 he was created a G.C.S.I. In 1901 a G.C.I.E., and in 1903 a G.C.V.O. In 1904 he was made honorary colonel of the 13th Rajputa, and in 1911 a Major General. In 1906 he was presented with the Honorary degree of

LL.D. of Edinburgh University and in 1912, made a Donat of the Order of the Hospital of St. John of Jerusalem. Among important events of His Highness's rule may be mentioned the raising of the Imperial Service Transport Corps in 1889-90; the construction of numerous irrigation works, hospitals and dispensaries; and the gift of 25 lakhs as an endowment to the Indian People's Famine Relief Trust. His Highness has contributed about 8 lakhs to various War funds, and 10 machine guns as a thank-offering for the recovery of H. M. the King from his accident in France. Jaipur City is the largest town in Rajputana and is one of the few eastern cities laid out on a regular plan. It contains, in addition to the Maharaja's Palace, many fine buildings. The administration of the State is carried on by the Maharaja assisted by a Council of ten members. The military force consists of an Imperial Service Transport Corps which has twice served in frontier campaigns and in the present war, and about 5,000 infantry, 700 cavalry and 860 artillerymen. The normal revenue is about 65 lakhs; expenditure about 59 lakhs.

**Kishangarh State** is in the centre of Rajputana and consists practically of two narrow strips of land separated from each other; the northern mostly sandy, the southern generally flat and fertile. The Chiefs of Kishangarh belong to the Rathor clan of Rajputs and are descended from Raja Udai Singh of Jodhpur, whose second son founded the town of Kishangarh in 1611. The State was brought under British protection in 1818. After various disputes necessitating British mediation, the State entered into good hands and was well ruled during the latter part of the nineteenth century. The present ruler is Major His Highness Maharajahdhiraja Sir Madan Singh B.h.dur, K.C.S.I., K.C.I.E., Umdal Rajpal-Buland Makan, who was born in 1884 and was invested with powers in 1905. He administers the State with the help of a Council of three members. His Highness served in France in 1914-15 and was mentioned in despatches by Field-Marshal Lord French. Revenue 5.7 lakhs; Expenditure 4.6 lakhs.

**Lawa State, or takurat, of Rajputana** is a separate chieftship under the protection of the British Government and independent of any Native States. It formerly belonged to Jaipur and then became part of the State of Tonk. In 1867, the Nawab of Tonk murdered the Thakur's uncle and his followers, and Lawa was then raised to its present State. The Thakurs of Lawa belonged to the Naruka sept of the Kachwaha Rajputs. The present Thakur, Mangal Singh, was born in 1873, and succeeded to the estate in May, 1892. Revenue about Rs. 11,000.

**Bundi State** is a mountainous territory in the south-east of Rajputana. The Chief of Bundi is the head of the Hara sept of the great clan of Chauhan Rajputs and the country occupied by this sept has for the last five or six centuries been known as Harauti. The State was founded in the early part of the fourteenth century and constant feuds with Mewar and Malwa followed. It threw in its lot with the Mahomedan emperors in the sixteenth century. In later times it was constantly ravaged by the

**Marathas and Pindaries** and came under British protection in 1818 at which time it was paying tribute to Holkar. The present ruler of this State—which is administered by the Maharao Raja and a Council of 5 in an old-fashioned but popular manner—is His Highness Maharao Raja Sir Raghubir Singh Bahadur, G.C.I.E., G.C.V.O., K.C.S.I. He was born in 1869 and succeeded in 1899. Revenue about 10 lakhs: Expenditure 9.6 lakhs.

**Tonk State**—Partly in Rajputana and partly in Central India, consists of six districts separated from each other. The ruling family belongs to the Pathans of Afghans of the Buner tribe. The founder of the dynasty was Amir Khan, a General in the army of Holkar at the end of the eighteenth century. He received a conditional guarantee of the lands he held under the Afghans from Holkar in 1817. His son was deposed in 1867 owing to misrule. The present ruler of the State is His Highness Nawab Sir Muhammad Ibrahim Ali Khan Bahadur, G.C.I.E. The administration is conducted by the Nawab and a Council of four members: but the Political Agent takes an active part in the guidance of the administration and the finances—owing to the indebtedness of the State. Revenue 11 lakhs: Expenditure 9 lakhs.

**Shahpura Chiefship** is a small pastoral State. The ruling family belongs to the Secodja clan of Rajputs. The Chiefship came into existence about 1629, being a grant from the Emperor Shah Jahan to one Sujjan Singh. The present Chief is Sir Nahar Singh, K.C.I.E., who succeeded by adoption in 1870 and received full powers in 1876. In addition to holding Shahpura by grant from the British Government the Raja Dhiraj possesses the estate of Kachhola in Udaipur for which he pays tribute and does formal service as a great noble of that State. Revenue 3 lakhs: Expenditure 2.6 lakhs.

**Bharatpur State** consists largely of an immense alluvial plain, watered by the Banaranga and other rivers. It passed into the hands of Mahomed Ghori at the end of the twelfth century and for 500 years was held by whatever dynasty ruled in Delhi. The present ruling family are Jats, of the Sinsinwal clan, who trace their pedigree to the eleventh century. The Bharatpur ruling family is of the Sinsinwal clan named so after their old village Sinsinwal. Bharatpur was the first State in Rajputana, except Dholpur, that made alliance with the British Government in 1803, helped Lord Lake with 5,000 horse in his conquest of Agra and battle of Laswari wherein the Maratha power was entirely broken and received five districts as reward for the service. In 1804, however, Bharatpur sided with Jaswant Rao Holkar against the Government which resulted in a fight with the Government. Peace was re-established in 1805 under a treaty of alliance and it continues in force. The State, being surped by Durjan Sal in 1825, the British Government took the cause of the rightful heir Maharaja Balwant Singh Sahab. Bharatpur was besieged by Lord Combermere and, as the faithful subjects almost all joined the British army, the result could not be otherwise than capture of the Capital and restoration of the State to its rightful owner. Bharatpur rendered valuable service to the British Government

during the Mutiny. The present chief is a minor, Maharaja Sawal Krishna Singh Bahadur, who was born in 1899 and succeeded in the following year, his father, Ram Singh, having been deposed for the murder of one of his servants. The administration is carried on by a Council of four members presided over by a Political Agent. Revenue 31 lakhs: Expenditure 28 lakhs.

**Dholpur State**, the easternmost State in Rajputana, has changed hands an unusual number of times. It was occupied by the British in 1803 and restored to the Gwalior Chief who formerly owned it, but by a fresh arrangement of 1805 it was constituted a State with other districts and made over to Maharaj Rana Kirat Singh, in exchange for his territory of Gohad which was given up to Sindhia. The ruling family are Jats of the Bamraolia clan, the latter name being derived from a place near Agra where the family held land in the twelfth century. The present chief—who is assisted in the administration by three Ministers—is H. H. Maharaj Rana Udaibhan Singh Lokinder Bahadur. He was born in 1893 and succeeded in 1911. Revenue 15 lakhs: Expenditure 12 lakhs.

**Karauli State** is a hilly tract in Eastern Rajputana, of which the ruler is the head of the Jadon clan of Rajputs who claim direct descent from Krishna and were at one time very powerful. On the decline of the Mughal power the State was subjugated by the Marathas, but by the treaty of 1817 it was taken under British protection. Its subsequent history is of interest chiefly for a famous adoption case, in 1852. The present ruler is H. L. Maharaja Sir Banwar Pal Deo Bahadur, G.C.I.E., who was born in 1864, installed in 1889, and invested with powers in 1880. He is assisted by a council of two members. Revenue 5 lakhs; Expenditure 4.4 lakhs.

**Kotah State** belongs to the Hara sept of the clan of Chauhan Rajputs, and the early history of their house is, up to the 17th century, identical with that of the Bundi family from which they are an offshoot. Its existence as a separate State dates from 1625. It came under British protection in 1817, but a dispute as to the succession made armed intervention necessary in 1821 when the Maharao was defeated at the battle of Mangrol. This dispute (due to the fact that an arrangement had been made by which one person—Zalim Singh—was recognized as the titular chief and another—Umed Singh—as the guaranteed actual ruler) broke out again in the thirties when it was decided with the consent of the Chief of Kotah to dismember the State and create a new principality of Jhalawar as a separate provision for the descendants of Zalim Singh. The present ruler is H. H. Maharao Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1873 and invested with full powers in 1896. In administration he is assisted by a Diwan. The most important event of his rule has been the restoration, on the deposition of the late chief of the Jhalawar State, of 15 out of the 17 districts which had been ceded in 1838 to form that principality. Revenue 31 lakhs: Expenditure 26 lakhs.

**Jhalwar State** (for history see under Kotah) consists of two separate tracts in the south-east of Rajputana. The ruling family belongs to the Jhala clan of Rajputs. The last ruler was deposed for misgovernment in 1896, part of the State was reassigned to Kotah, and Kunwar Bhawani Singh, son of Thakur Chhatarsal of Fatehpur, was selected by Government to be the Chief of the new State. He was born in 1874 and was created a K.C.S.I. in 1908. He is assisted in administration by a Council, and has done much to extend education in the State. Revenue 5 lakhs.

**Bikaner State**, the second largest in Rajputana, consists largely of sandy and ill-watered land. It was founded by Bika, a Rathor Rajput, the sixth son of a Chief of Marwar, in the 15th century. Rai Singh, the first Raja, was one of Akbar's most distinguished generals, and built the main fort of Bikaner. Throughout the 18th century there was constant fighting between Bikaner and Jodhpur. In 1818 the Maharaja invited the assistance of British troops to quell a rebellion, and subsequently a special force had to be raised to deal with the dacoits on the southern borders of the State. The Thakurs of the State continued to give trouble up to the eighties. The present chief is Colonel H. H. Maharajah Sir Ganga Singh Bahadur, G.C.S.I., G.C.I.E., A.D.C. to the King, who was born in 1880 and invested with full powers in 1898. He raised an Imperial Service Camel Corps which served in China and Somaliland, and His Highness served in the former campaign himself, being mentioned in despatches. In 1900 he was awarded the first class Kaisar-i-Hind medal for the active part he took in relieving the great famine of 1899-1900. He is an honorary LL.D. of Cambridge. In administration His Highness is assisted by five secretaries, to each of whom are allotted certain departments; and there is a council of five members which is primarily a judicial body, but is consulted in matters of importance. The normal revenue is Rs. 26 lakhs and the expenditure 21 lakhs: there are no debts. A coal mine is worked at Palana, 14 miles south of the capital.

**Alwar State** is a hilly tract of land in the East of Rajputana. Its chiefs belong to the Lalawat branch of the Naruka Rajputs, an offshoot from the Kachwaha Rajputs, of whom the Maharaja of Jaipur is the head. The State was founded by Pratap Singh, who before his death in 1791 had secured possession of large portions of the Jaipur State. His successor sent a force to co-operate with Lord Lake in the war of 1803 and an alliance was concluded with him in that year, when the boundaries of the State as now recognised were fixed. Various rebellions and disputes about succession mark the history of the State during the earlier part of the nineteenth century. The present chief, H. H. Lt.-Col. Sewai Maharaja Sir Jey Singhji Bahadur, K.C.S.I., K.C.I.E., who was born in 1882, succeeded his father in 1892 and was invested with powers in 1903. He carries on the administration with the assistance of a Council of four Ministers, Members of His Highness, Council and various heads of departments. The normal revenue and expenditure are about Rs. 32 lakhs a year. The State maintains an Imperial service regiment of cavalry, another of infantry, and an irregular force. The late Maharaja was the first chief in Rajputana to offer (in 1888) aid in the defence of the Empire. The capital is Alwar on the Rajputana-Malwa Railway, 98 miles south-west of Delhi.

#### RAJPUTANA.

*Agent to Governor-General*—Sir E. G. Colvin.

#### MEWAR.

*Resident*—C. L. S. Russell.

#### JAIPUR.

*Resident*—Lieut.-Col. R. A. E. Benn.

#### EASTERN RAJPUTANA STATES.

*Political Agent*—Major G. H. Anderson.

#### WESTERN RAJPUTANA STATES.

*Resident*—Lieut.-Col. C. J. Windham.

#### HABAOOTI AND TONK.

*Political Agent*—S. S. Waterfield.

#### KOTAH AND JHALAWAR.

*Political Agent*—Lieut.-Col. A. B. Drummond.

### CENTRAL INDIA AGENCY.

Central India is the name given to the country occupied by the Native States grouped together under the supervision of the Political Officer in charge of the Central India Agency. These States lie between 21° 24' and 26° 32' N. lat. and between 74° 0' and 83° 0' E. long. The British districts of Jhansi and Lalitpur divide the agency into two main divisions—Bundelkhand and Baghelkhand lying to the east, and Central India proper to the west. The total area covered is 78,772 square miles, and the population (1911) amounts to 93,980. The great majority of the people are Hindus. The principal States are eight in number—Gwalior, Indore, Bhopal, Rewa, Dhar, Jaora, Datia and Orchal of which two, Bhopal and Jaora, are Mahomedan and the rest are Hindu. Besides these there are a multitude of petty States held by their rulers under the immediate guarantee of the British Government, but having feudal relations with one or other of the larger States. The total number of States amounts to 153.

For administrative purposes they are divided into the following groups: Baghelkhand Agency, 12 States (principal State Rewa); Bhopal Agency, 19 States (principal Bhopal); State Bhopawar Agency, 21 States (principal State Dhar); Bundelkhand Agency, 22 States (principal States, Datia and Orchha); Gwalior Agency, 32 States (principal State, Gwalior); Indore Residency, 9 States (principal State, Indore); Malwa Agency, 38 States (principal State, Jaora). The Agency may be divided into three natural divisions, the plateau, lowlying, and hilly. The plateau tract includes the Malwa plateau, the Highland tract stretching from the great wall of the Vindhya to Marwar, the land of open rolling plains. The lowlying tract embraces Northern Gwalior and stretches across into Bundelkhand and Baghelkhand up to the Kaimur Range. The hilly tract lies along the ranges of the Vindhya and the Satpuras. There agriculture is little practised, the inhabitants being mostly members of the wild tribes.

The territories of the different States are much intermingled, and their political relations with the Government of India and each other are very varied. Eleven Chiefs have direct treaty engagements with the British Government.

The following list gives the approximate size, population and revenue of the eight principal States above mentioned :—

Name.	Area in square miles.	Population.	Revenue, Rs. lakhs.
Gwalior ..	25,133	3,102,279	140
Indore ..	9,506	1,007,856	70
Bhopal ..	6,902	730,383	30
Rewah ..	13,000	1,514,843	53
Dhar ..	1,783	154,070	9
Jaora ..	568	75,951	8
Datia ..	911	154,603	9
Orcha ..	2,079	330,032	11

**Gwalior.**—The house of Scindia traces its descent to a family of which one branch held the hereditary post of *patel* in a village near Satara. The head of the family received a patent of rank from Aurangzeb. The founder of the Gwalior House was Kanoji Scindia who is said to have been a personal attendant on the Peshwa Baji Rao. In 1726 together with Malhar Rao Holkar, the founder of the house of Indore, he was authorised by the Peshwa to collect revenues and he fixed his headquarters at the ancient city of Ujjain, which became the capital of the Scindia dominions. Gwalior subsequently played a leading part in shaping the history of India. The reverses which Scindia's troops met with at the hands of the British in 1778 and 1780 led to the treaty of Salbai (1782), which made the British arbiters in India and recognised Scindia as an independent Chief and not as a vassal under the Peshwa. Subsequently Scindia's military power, developed by the French Commander DeBoigne, was completely destroyed by the British victories of Ahmednagar, Assaye, Asirgarh and Laswari.

The present ruler is Major-General H. H. Maharaja Sir Madho Rao Aljah Bahadur Scindia, G.C.V.O., G.C.S.I., A.D.C. to the King. He succeeded in 1886 and obtained powers in 1894. In 1901 he went to China during the war; he holds the rank of honorary Major-General of the British Army and the honorary degrees of LL.D., Cambridge, and D.C.L., Oxon. He is also a Donat of the Order of St. John of Jerusalem in E gland. The administration is controlled by the Maharaja assisted by five members of the *Majlis-i-khas*.

The northern part of the State is traversed by the G. I. P. Railway and two branches run from Bhopal to Ujjain and from Bina to Baran. The Gwalior Light Railway runs for 250 miles from Gwalior to Bhind, from Gwalior to Sheopur and from Gwalior to Sipri. The main industries are cotton ginning, which is done all over the State; fine muslins made at Chanderi, leather work, etc. The State maintains three regiments of Imperial Service Cavalry, two battalions of Imperial Service Infantry and a transport corps. Laahkar, the capital city, is two miles to the south of the ancient city and the fort of Gwalior. Annual expenditure 144 lakhs.

**Indore.**—The Holkars of Indore belong to the shepherd class, the founder of the house, Malhar Rao Holkar, being born in 1693. His soldierly qualities brought him to the front under the Peshwa, who took him into his service and employed him in his conquests. When the Maratha power was broken at the battle of Panipat, in 1761, Malhar Rao had acquired vast territories stretching from the Deccan to the Ganges. He was succeeded by a lunatic grandson who again was succeeded by his mother, Ahilya Bai, whose administration is still looked upon as that of a model ruler. Disputes as to the succession and other causes weakened this powerful State, and, when it assumed a hostile attitude on the outbreak of war in 1817 between the British and the Peshwa, Holkar was compelled to come to terms. The Treaty of Mandasir in 1818 still governs the regulations existing between the State and the British Government. In the mutiny of 1857, when Holkar was unable to control his troops he personally gave every possible assistance to the authorities at Mhow.

In 1903 Sivaji Rao, who died in 1908, abdicated in favour of his son, His Highness Maharaja Tukoji Rao Holkar, the present ruler, who was born in 1890, and was formally invested with ruling powers in November 1911. In the administration His Highness is assisted by his Chief Minister and a Council of 5 Ministers. The State Army consists of 519 Imperial Service Troops and 1,029 State forces. The capital is Indore City on the Ajmer-Khandwa Section of the Rajputana-Malwa Railway. The ordinary revenue is estimated at Rs. 85 lakhs.

**Bhopal.**—The principal Mussalman State in Central India, ranks next in importance to Hyderabad among the Muhammadan States of India. The ruling family was founded by Dost Mohammed Khan, a Tihah Afghan in the service of Aurangzeb. He was nominated Superintendent of the District of Balrasia and succeeded in establishing his independent authority in Bhopal and its neighbourhood. In the early part of the 19th century, the Nawabs successfully withstood the inroads of Scindia and Bhonsla and by the agreement of 1817 Bhopal undertook to assist the British with a contingent force and to co-operate against the Pindari bands.

The present Ruler of the State, Her Highness Nawab Sultan Jahan Begum, C. I., G.C.S.I., G.C.I.E., is the third in the successive line of lady-rulers, who have ruled the destinies of the State with marked ability. Having succeeded in 1901, she personally conducts, and has introduced a number of reforms in, the administration of her State. Her eldest son, Hon. Major Nawab Mahomad Nasrullah Khan, controls the Forest Department and her second son Hon. Major Nawabzada Mahomad Obaidullah Khan, C.S.I., who holds the rank of Brig.-Genl. in the State Army, is the Commander-in-Chief of the State Forces, while the youngest Nawabzada, Mahomad Hamidullah Khan, B.A., and Hon. Major in the Bhopal Army, is the head of her Highness' Secretariat and President of the Council advising the Darbar on Municipal affairs. The State maintains one regiment each of Imperial Service Cavalry and Infantry. The capital, Bhopal City, on the northern bank of an extensive lake is situated at the junction of the G. I. P. Ry. with the Bhopal Ujjain Railway.

**Rewah.**—This State lies in the Baghelkhand Agency, and falls into two natural divisions separated by the scarp of the Kaimur range. Its Chiefs are Baghel Rajputs descended from the Solanki clan which ruled over Gujrat from the tenth to the thirteenth century. In 1812, a body of Pindaries raided Mirzapur from Rewah territory and the chief, who had previously rejected overtures for an alliance, was called upon to accede to a treaty acknowledging the protection of the British Government. During the Mutiny, Rewah offered troops to the British, and for his services then, various parganas, which had been seized by the Marathas, were restored to the Rewah Chief. The present chief is H. H. Maharaja Sir Venkat Raman Singh, G.C.S.I., who was born in 1876. He is assisted in the administration by two Commissioners, one for revenue matters and one for judicial. The State force consist of about 1,700 men. The State is famous for its archaeological remains and is rich in minerals, coal being mined at Umaria. The average expenditure is Rs. 11 lakhs.

**Dhar.**—This State, under the Bhopawar Agency, takes its name from the old city of Dhar, long famous as the capital of the Paramara Rajputs, who ruled over Malwa from ninth to the thirteenth century and from whom the present chiefs of Dhar—Ponwar Marathas—claim descent. In the middle of the 18th century the Chief of Dhar, Anand Rao, was one of the leading chiefs of Central India, sharing with Holkar and Sindhia the rule of Malwa. But in 1819, when a treaty was made with the British, the State had become so reduced that it consisted of little more than the capital. The ruler is H. H. Raja Sir Udaji Rao Ponwar, K.C.S.I., who was born in 1886, and has control of all civil, judicial, and ordinary administrative matters. There are 22 feudatories, of whom 13 hold under a guarantee from the British Government. The average expenditure is about 8 lakhs.

**Jaora State.**—This State is in the Malwa Agency and has its head quarters at Jaora town. The first Nawab was an Afghan from Swat, who had come to India to make his fortune, found employment under the freebooter Amir Khan, and obtained the State after the treaty of Mandasore in 1817. The present chief is Major H. H. Sir Mahomed Iftikhar Ali Khan, K.C.I.E., who was born in 1883 and is an Honorary Major in the Indian Army. The soil of the State is among the richest in Malwa, being mainly of the best black cotton variety, bearing excellent crops of poppy. The average annual revenue is Rs. 7,72,000.

**Ratlam.**—Is the premier Rajput State in the Malwa Agency. It covers an area of 871 square miles, including that of the Jagir of Khera in the Kushalgarh Chiefship, which pays an annual tribute to the Ratlam Durbar. The State was founded by Ratansingh, a great grandson of Raja Udai Singh of Jodhpur, in 1652. The Raja of Ratlam is the religious head of the Rajputs of Malwa, and important caste questions concerning even Thakurs tributary to other chiefs are referred to him for decision. The present Chief of Ratlam is Col. His Highness Raja Sir Sajjan Singh, K.C.S.I., who was born in 1880, and invested with full powers in 1898. In administration His Highness is

assisted by a Council of four members. Since April 1915, His Highness has been serving at the front in France.

Senior Member of Council.—Raj Bahadur Brijmohannath A. Zutshi, B.A., LL.B.

**Dafia State.**—The chiefs of this State, in the Bundelkhand Agency, are Bundela Rajputs of the Orchha house. The territory was granted by the chief of Orchha to his son Bhagwan Rao in 1626, and this was extended by conquest and by grants from the Delhi emperors. The present chief is H. H. Maharaja Lokendra Govind Singh Bahadur who was born in 1886 and succeeded in 1907. The heir-apparent, Raja Bahadur Balbhadra Singh (b 1907) is being educated at the Daly College.

**Orchha State.**—The chiefs of this State are Bundela Rajputs claiming to be descendants of the Gaharwars of Benares. It was founded as an independent State in 1048 A.D. It entered into relations with the British by the treaty made in 1812. The present ruler is His Highness Sir Pratap Singh, G.C.S.I., G.C.I.E., who was born in 1854. He has the title of Saramad-i-Rajaha-i-Bundelkhand Maharaja Mahendra Sawal Bahadur. The State has a population of 330,032 and an area of 2080 square miles. The capital is Tikamgarh, 36 miles from Lalitpur on the G. I. P. Railway. Orchha, the old capital, has fallen into decay but is a place of interest on account of its magnificent buildings of which the finest were erected by Bir Singh Deo, the most famous ruler of the State (1605-1627).

Agent to Governor-General.—O. V. Bosanquet.

INDORE.

Resident.—Vacant.

BHOPAL.

Political Agent.—Lt. Col. F. W. P. Macdonald  
BUNDELKHAND.

Political Agent.—Lieut.-Col. P. T. A. Spence.  
BAGHELKHAND.

Political Agent.—Lieut.-Col. F. G. Berville,  
C.I.E.

BHOPAWAR.

Political Agent.—L. M. Crump.

**Sikkim.**

Sikkim is bounded on the north and north-east by Tibet, on the south-east by Bhutan, on the south by the British district of Darjiling, and on the west by Nepal. The population consists of Bhutias, Lepchas, and Nepalese. It forms the direct route to the Chumbi Valley in Tibet. The main axis of the Himalayas, which runs east and west, forms the boundary between Sikkim and Tibet. The Singaila and Chola ranges, which run southwards from the main chain, separate Sikkim from Nepal on the west, and from Tibet and Bhutan on the east. From the eastern flank of the Singaila range rise the great snow peaks of Kinchinjunga (28,146 feet), one of the highest mountains in the world; it throws out a second spur terminating at Tendong. The Chola range which is much loftier than that of Singaila, leaves the main chain at the Dongkya mountain.

Tradition says that the ancestors of the rajas of Sikkim originally came from eastern Tibet. The State was twice invaded by the Gurkhas at

the end of the eighteenth century. On the outbreak of the Nepal War in 1814, the British formed an alliance with the Raja of Sikkim and at the close of the war the Raja was rewarded by a considerable accession of territory. In 1835 the Raja granted the site of Darjiling to the British and received Rs. 3,000 annually in lieu of it. This grant was stopped and a part of the State was annexed for the seizure and detention of Dr. Campbell, the Superintendent of Darjiling, and Dr. Hooker, the famous naturalist, in 1849. The State was previously under the Government of Bengal, but was brought under the direct supervision of the Government of India in 1906. The State is thinly populated, the area being 2,818 square miles, and the population 87,920, chiefly Buddhists and Hindus. The most important crop is maize. There are several trade routes through Sikkim from Darjiling District into Tibet. In the convention of 1890 provision was made for the opening of a trade route but the results were disappointing, and the failure of the Tibetans to fulfil their obligations resulted in 1904 in the despatch of a mission to Lhasa, where a new convention was signed. Trade with the British has increased in recent years, and in 1911-12 reached total value of 24 lakhs. A number of good roads have been constructed in recent years. The present ruler His Highness Maharajah Tashis Namgyab, who was born in 1893 and succeeded in 1914. The Political Officer stationed at Gangtok advises and assists the Maharajah and his Council. The average revenue is Rs. 2,85,000.

*Political Officer in Sikkim*:—C. A. Bell, C.M.G.

### Bhutan.

Bhutan extends for a distance of approximately 190 miles east and west along the southern slopes of the central axis of the Himalayas, adjacent to the northern border of Eastern Bengal and Assam. Its area is 18,000 square miles and its population, consisting of Buddhists and Hindus, has been estimated at 300,000. The country formerly belonged to a tribe called Tek-pa, but was wrested from them by some Tibetan soldiers about the middle of the seventeenth century. British relations with Bhutan commenced in 1772 when the Bhotias invaded the principality of Cooch Behar and British aid was invoked by that State. After a number of raids by the Bhutanese into Assam, an envoy (the Hon. A. Eden) was sent to Bhutan, who was grossly insulted and compelled to sign a treaty surrendering the Duars to Bhutan. On his return the treaty was disallowed and the Duars annexed. This was followed by the treaty of 1865, by which the State's relations with the Government of India were satisfactorily regulated. The State formerly received an allowance of half a lakh a year from the British Government in consideration of the cession in 1865 of some areas on the southern borders. This allowance was doubled by a new treaty concluded in January 1910, by which the Bhutanese Government bound itself to be guided by the advice of the British Government in regard to its external relations, while the British Government undertook to exercise no interference in the internal administration of Bhutan. On the occasion of the Tibet Mission of 1904, the Bhotias gave strong proof of their

friendly attitude. Not only did they consent to the survey of a road through their country to Chumbi, but their ruler, the Tongsa Penlop, accompanied the British troops to Lhasa, and assisted in the negotiations with the Tibetan authorities. For these services he was made a K.C.I.E., and he has since entertained the British Agent hospitably at his capital. The ruler is now known as H. H. the Maharaja of Bhutan, Sir Ugyen Wangchuk, K.C.S.I., K.C.I.E. At the head of the Bhutan Government, there are nominally two supreme authorities; the Dharma Raja, known as Shapting Renipoché, the spiritual head, and the Deb or Depa Raja, the temporal ruler. The Dharma Raja is regarded as a very high incarnation of Buddha, far higher than the ordinary incarnations in Tibet, of which there are several hundreds. On the death of a Dharma Raja a year or two is allowed to elapse, and his reincarnation then takes place, always in the Choje, or royal family of Bhutan.

Cultivation is backward and the chief crop is maize. The Military force consists of local levies under the control of the different chiefs. They are of no military value.

### Nepal.

The kingdom of Nepal is a narrow tract of country extending for about 520 miles along the southern slope of the central axis of the Himalayas. It has an area of about 54,000 square miles, with a population of about 5,000,000, chiefly Hindus. The greater part of the country is mountainous, the lower slopes being cultivated. Above these is a rugged broken wall of rock leading up to the chain of snow-clad peaks which culminate in Mount Everest (29,002 feet) and others of slightly less altitude. The country before the Gurkha occupation was split up into several small kingdoms under Newar kings. The Gurkhas under Prithvi Narayan Shah overran and conquered the different kingdoms of Patan, Kathmandu, and Bhatgaon, and other places during the latter half of the 18th century and since then have been rulers of the whole of Nepal. In 1846 the head of the Rana family obtained from the sovereign the perpetual right to the office of Prime Minister of Nepal, and the right is still enjoyed by his descendant. In 1850 Jung Bahadur paid a visit to England and was thus the first Hindu Chief to leave India and to become acquainted with the power and resources of the British nation. The relations of Nepal with the Government of India are regulated by the treaty of 1816 and subsequent agreements by which a representative of the British Government is received at Kathmandu. This British representative has come to be styled as Resident though his function differs much from that of a Resident at the courts of the Native States of India. By virtue of the same treaty Nepal maintains a Representative at Delhi and her treaty relations with Tibet allow her to keep a Resident at Lhasa of her own. Her relation with China is of a friendly nature. Ever since the conclusion of the treaty of 1816 the friendly relations with the British Government have steadily been maintained and during the rule of the present Prime Minister it has been at its height as is evidenced by the valuable friendly help in men and money

which has been given and which was appreciatively mentioned in both the Houses in Parliament and by Mr. Asquith in his Gindhall Speech in 1915.

From the foregoing account of the history of Nepal it will be seen that the Government of the country has generally been in the hands of the Minister of the day. Since the time of Jung Bahadur this system of government has been clearly laid down and defined. The sovereign, or Maharaj Dhiraj, as he is called, is but a dignified figure-head, whose position can best be likened to that of the Emperor of Japan during the Shogunate. The real ruler of the country is the Minister who, while enjoying complete monopoly of power, couples with his official rank the exalted title of Maharaja. Next to him comes the Commander-in-Chief, who ordinarily succeeds to the office of Minister.

The present Minister at the head of affairs of Nepal is Maharaja Sir Chandra Shum Shere Jung Bahadur Rana, G. C. B., G. C. S. I., G. C. V. O., D. C. L. and Honorary Lieutenant-General in the British Army. He has been Prime Minister and Marshal of Nepal since June, 1901.

Rice, wheat and maize form the chief crops in the lowlands. Mineral wealth is supposed to be great, but, like other sources of revenue, has not been developed. Communications in the State are primitive. The revenue is about two crores of rupees per annum. The standing army is estimated at 45,000, the high posts in it being filled by relations of the Minister. The State is of considerable archaeological interest and many of the sites connected with scenes of Buddha's life have been identified in it by the remains of inscribed pillars.

*Resident:* Lieut.-Col. S. F. Bayley.

## NORTH-WEST FRONTIER STATES.

The native states of the North-West Frontier Provinces are Amb, Chitral, Dir, Nawagai (Bajaur), and Phulera. The total area is about 7,704 square miles and the population, mainly Mahomedan, is 1,622,094. The average annual revenue of the first four is about Rs. 4,65,000; that of Phulera is unknown.

**Amb.**—Is only a village on the western bank of the Indus in Independent Tanawala.

**Chitral.**—Runs from Dir to the south of the Hindu-Kush range in the north, and has an area of about 4,500 square miles. The ruling dynasty has maintained itself for more than three hundred years, during the greater part of which the State has constantly been at war with its neighbours. It was visited in 1885 by the Lockhart Mission, and in 1889, on the establishment of a political agency in Gilgit, the ruler of Chitral received an annual subsidy from the British Government. That subsidy was increased two years later on condition that the ruler, Amam-ul-Mulk, accepted the advice of the British Government in all matters connected with foreign policy and frontier defence. His sudden death in 1892 was followed by a dispute as to the succession. The eldest son Nizam-ul-Mulk was recognised by Government, but he was murdered in 1896. A religious war was declared against the infidels and the Agent at Gilgit, who had been sent to Chitral to report on the situation, was besieged with his escort and a force had to be despatched (April 1895) to their relief.

The three valleys of which the State consists are extremely fertile and continuously cultivated. The internal administration of the country is conducted by the Mehtar, and the

foreign policy is regulated by the Political Agent.

**Dir.**—The territories of this State, about 5,000 square miles in area, include the country drained by the Panjkora and its affluents down to the junction of the former river with the Bajaur or Rud, and also the country east of this from a point a little above Tirah in Upper Swat down to the Dush Khel Country, following the right bank of the Swat river throughout. The Khan of Dir is the overlord of the country, exacting allegiance from the petty chiefs of the clans. Dir is mainly held by Yusufzai Pathans, the old non-Pathan inhabitants being now confined to the upper portion of the Panjkora Valley known as the Bashkar.

**Bajaur.**—Nawagai is a tract of country included in the territories collectively known as Bajaur which is bounded on the north by the Panjkora river, on the east by the Utman Khel and Mohmand territories and on the west by the watershed of the Kuna river which divides it from Afghanistan. The political system, if it can be termed system, is a communal form of party government, subject to the control of the Khan of Nawagai, who is nominally the hereditary chief of all Bajaur. Under him the country is divided into several minor Khanates, each governed by a chieftain, usually a near relative of the Khan. But virtually the authority of the chieftains is limited to the rights to levy tithe, or *ushar*, when they can enforce its payment, and to exact military service if the tribesmen choose to render it.

*Political Agent for Dir, Swat and Chitral:*  
Major W. J. Keen.



## NATIVE STATES UNDER LOCAL GOVERNMENTS.

**Madras Presidency** includes 5 Native States covering an area of 10,097 square miles. Of these the States of Travancore and Cochin represent ancient Hindu dynasties. Pudukottai is the inheritance of the chieftain called the Tondiman. Banganapalle and Sandur, two petty States, of which the first is ruled by a Nawab, lie in the centre of two British districts

Name.	Area sq. miles.	Population.	Approx. Revenue in lakhs of rupees.
Travancore ..	7,129	3,428,975	128
Cochin ..	1,361	918,110	47
Pudukottai ..	1,178	411,878	16
Banganapalle ..	255	39,356	2.8
Sandur ..	161	13,517	1.7

**Travancore**—This State occupies the south-west portion of the Indian Peninsula, forming an irregular triangle with its apex at Cape Comorin. The early history of Travancore is in great part traditional; but there is little doubt that H. H. the Maharaja is the representative of the Chera dynasty, one of the three great Hindu dynasties which exercised sovereignty at one time in Southern India. The petty chiefs, who had subsequently set up as independent rulers within the State, were all subdued, and the whole country, included within its present boundaries, was consolidated and brought under one rule, by the Maharaja Marthanda Varma (1729-58). The English first settled at Anjengo, a few miles to the north of Trivandrum, and built a factory there in 1681. In the wars in which the East India Company were engaged in Madras and Tinnevely, in the middle of the 18th century, the Travancore State gave assistance to the British authorities. Travancore was reckoned as one of the staunchest allies of the British Power and was accordingly included in the Treaty made in 1764 between the East India Company and the Sultan of Mysore. To protect the State from possible inroads by Tippu, an arrangement was come to in 1788 with the East India Company, and in 1795 a formal treaty was concluded, by which the Company agreed to protect Travancore from all foreign enemies. In 1805 the annual subsidy to be paid by Travancore was fixed at 8 lakhs of rupees.

The present ruler is His Highness Maharaja Sri Rama Varma, C.C.S.I., G.C.I.E., who was born in 1857 and ascended the throne in 1895. The government is conducted in his name with the assistance of a Dewan (M. Krishnan Nair). The work of legislation is entrusted to a Council brought into existence in 1888. An assembly known as the Sri Mulam Popular Assembly meets once a year, when its members are able to bring suggestions before the Dewan. The State supports a military force of 1,472 men. Education has advanced considerably in recent

years and the State takes a leading place in that respect. The principal food grain grown is rice, but the main source of agricultural wealth is the coconut. Other crops are pepper, areca-nut, jack-fruit and tapioca. Cotton weaving and the making of matting from the coir are the chief industries. The State is well provided with roads, and with a natural system of back-waters, besides canals and rivers navigable for country crafts. Two lines of railways intersect the country, the Cochin-Shoranore in the north-west and the Tinnevely-Quilon passing through the heart of the State. A third line, from Quilon to Trivandrum, is in process of construction. The capital is Trivandrum.

*Political Agent* : R. A. Graham.

**Cochin**.—This State on the west coast of India is bounded by the Malabar District to the Madras Presidency and the State of Travancore. Very little is known of its early history. According to tradition, the Rajas of Cochin hold the territory in right of descent from Cherman Perumal, who governed the whole country of Kerala, including Travancore and Malabar, as Viceroy of the Chola Kings about the beginning of the ninth century, and afterwards established himself as an independent Ruler. In 1502, the Portuguese were allowed to settle in what is now British Cochin and in the following year they built a fort and established commercial relations in the State. In the earlier wars with the Zamorin of Calicut, they assisted the Rajas of Cochin. The influence of the Portuguese on the west coast began to decline about the latter part of the seventeenth century, and in 1663 they were ousted from the town of Cochin by the Dutch with whom the Raja entered into friendly relations. About a century later, in 1759, when the Dutch power began to decline, the Raja was attacked by the Zamorin of Calicut, who was expelled with the assistance of the Raja of Travancore. In 1776, the State was conquered by Hyder Ali, to whom it remained tributary and subordinate, and subsequently to his son, Tippu Sultan. A treaty was concluded in 1791 between the Raja and the East India Company, by which His Highness agreed to become tributary to the British Government for his territories which were then in the possession of Tippu, and to pay a subsidy.

His Highness Sir Sri Rama Varmah, C.C.S.I., G.C.I.E., who was born in 1852, and who ascended the throne in 1895, having abdicated in December, 1914, His Highness Sri Rama Varmah, who was born on 6th October, 1858, succeeded to the throne and was duly installed as Raja on the 21st January 1915. The administration is conducted under the control of the Raja whose chief Minister and Executive Officer is the Dewan (J. W. Bhore). The forests of Cochin form one of its most valuable assets. They abound in teak, ebony, blackwood, and other valuable trees. Rice forms the staple of cultivation. Coconuts are largely raised in the sandy tracts, and their products form the chief exports of the State. Communications by road and back-waters are good, and the State owns a line from Shoranore

Prnakulam, the capital of the State, and a Forest Steam Tramway used in developing the forests. The State supports a force of 25 officers and 251 men.

*Political Agent:* R. A. Graham.

**Pudukottai.**—This State is bounded on the north and west by Trichinopoly, on the south by Madura and on the east by Tanjore. In early times a part of the State belonged to the Chola Kings and the southern part to the Pandya Kings of Madura. Relations with the English began during the Carnatic wars. During the siege of Trichinopoly by the French in 1752, the Tondiman of the time did good service to the Company's cause by sending them provisions, although his own country was on at least one occasion ravaged as a consequence of his fidelity to the English. In 1756 he sent some of his troops to assist Muhammad Yusuf, the Company's sepooy commander, in settling the Madurai and Tinnevely countries. Subsequently he was of much service in the wars with Haidar Ali. His services were rewarded by a grant of territory subject to the conditions that the district should not be alienated (1806). Apart from that there is no treaty or arrangement with the Raja. The present ruler is Sri Bihadamba Sir Marthanda Blairava Tondiman Bahadur, C.C.I.E., who is eighth in descent from the founder of the family. He succeeded in 1886. The Collector of Trichinopoly is ex-officio Political Agent for Pudukottai. The administration of the State, under the Raja, is entrusted to a State Council of three members, a Superintendent (Mr. Sidney Burn, I.C.S.) Dewan, and Councillor. The various departments are constituted on the British India model. The principal food crop is rice. The forests, which cover about one-seventh of the State, contain only small timber. There are no large industries. The State is well provided with roads, but Pudukottai is the only municipal town in the State.

*Political Agent:* E. S. Lloyd.

**Banganapalle.**—This is a small State in two detached portions which in the eighteenth century passed from Hyderabad to Mysore and back again to Hyderabad. The control over it was ceded to the Madras Government by the

Nizam in 1800, and subsequently passed through a long period of mismanagement ending in the removal of the Nawab Fateh Ali Khan in 1905. The present ruler is Nawab Sayid Ghulam Ali Khan, who administers the State with the assistance of the Dewan, Khan Bahadur Khaja Akbar Hussain. The chief food grains grown are rice, wheat and cholam. Roads have recently been constructed and the capital Banganapalle, is being gradually opened up with broad thoroughfares. The Nawab pays no tribute and maintains no military force. Sericulture, lac cultivation and weaving industries have lately been started in the State under the Superintendent of Industries.

*Political Agent:* H. G. Stokes, C.S.I., I.C.S.

**Sandur.**—This is a small State almost surrounded by the District of Bellary the Collector of which is the Political Agent. Its early history dates from 1728 when it was first seized by an ancestor of the present Raja, a Maratha named Sidhoji Rao. It subsequently became a vassal to the Peshwa, after whose downfall a formal title for the State was granted by the Madras Government to one Siva Rao. The present ruler is H. H. Raja Srimant Venkata Rao, Rao Saheb Ghorpade, Mamulkat Madar, Senapathi, who was born in 1892. The State is administered by the Raja and the Dewan (M. E. A. Subraya Modilar Avergal). The Raja pays no tribute and maintains no military force. The most important staple crop is cholam. Teak and sandal wood are found in small quantities in the forests.

The minerals of the State possess unusual interest. The hematites found in it are probably the richest ore in India. An outcrop near the southern boundary forms the crest of a ridge 150 feet in height, which apparently consists entirely of pure steel grey crystalline hematite (specular iron) of intense hardness. Some of the softer ores used to be smelted, but the industry has been killed by the cheaper English iron. Manganese deposits have also been found in three places, and in 1911-12 over 85,000 tons of manganese ore were transported by one company.

*Political Agent:* J. M. Turing, I.C.S.

## UNDER THE GOVERNMENT OF BOMBAY.

More than a half of the total number of the very various units counted as Native States in India are under the Government of Bombay. The characteristic feature of the Bombay States is the great number of petty principalities; the peninsula of Kathiawar alone contains nearly two hundred separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. As the rule of succession by primogeniture applies only to the larger principalities, the minor states are continually suffering disintegration. In Bombay, as in Central India, there are to be found everywhere the traces of disintegration and disorder left by the eighteenth century. In no part of

India is there a greater variety of principalities. The bulk of them are of modern origin, the majority having been founded by Marathas in the general scramble for power in the middle of the eighteenth century, but several Rajput houses date from earlier times. Interesting traces of ancient history are to be found at Sachin, Janjira and Jafarabad, where chiefs of a foreign ancestry, descended from Abyssinian admiral of the Doccen fleets, still remain. A few aboriginal chiefs, Bhils or Kolis, exercise an feeble authority in the Dange and the hilly country that fringes the Mahi and the Narbada rivers.

The control of the Bombay Government is exercised through Political Agents, whose positions and duties vary greatly. In some of the more important States their functions are confined to the giving of advice and the

exercise of a general surveillance; in other cases they are invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. Some of the States are subordinate to other States, and not in direct relations with the British Government; in these cases the status of the feudatories is usually guaranteed by Government. The powers of the chiefs are regulated by treaty or custom, and range downwards to a mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of Kathiawar.

The native States in the Bombay Presidency number 377. Area 65,761 square miles. Population (1911) 7,411,075. They are divided for administrative purposes into the following agencies:—Bijapur Agency, 2 states; Cutch Agency, 1 state; Dharwar Agency, 1 state (Savanur); Kaira Agency, 1 state (Cambay); Kathiawar Agency, 187 states (principal states, Bhavnagar, Dhrangadhra, Gondal, Junagadh, Navanagar); West Khandesh Agency, 20 states; Kolaba Agency, 1 state (Janjira); Kolhapur Agency, 9 states (principal state; Kolhapur, with 9 feudatory states); Mahi Kantha Agency, 51 states (principal state, Idar); Nasik Agency, 1 state ((Surgana); Palanpur Agency, 17 states (principal state, Palanpur); Poona Agency, 1 state (Bhor); Rewa Kantha Agency, 62 states (principal state, Rajpipla); Satara Agency, 2 states; Savantvadi Agency, 1 state; Sholapur Agency, 1 state; Sukkur Agency, 1 state (Khairpur); Surat Agency, 17 states; Thana Agency, 1 state (Janhar). The table below gives details of the area, etc., of the more important States:—

State.	Area in sq. miles	Popula- tion.	Approx. Revenue in lakhs of rupees.
Bhavnagar ..	2,860	441,367	47
Cutch ..	7,616	513,429	25
Dhrangadhra ..	1,156	79,142	12
Gondal ..	1,024	161,916	15
Idar ..	1,689	202,811	6
Junagadh ..	3,284	434,222	26
Khairpur ..	6,050	223,788	15
Kolhapur ..	3,165	833,441	57
Navanagar ..	3,791	349,400	22
Palanpur ..	1,750	226,250	5
Rajpipla ..	1,517	161,588	9

**Bijapur Agency.**—This comprises the Satara jaghir of Jath and the small state of Daphlapur (total area 930 square miles), the latter (which has an area of 96 square miles) being an integral part of the State of Jath to which it will lapse on the demise of the present Rani, the widow of the late chief. On the annexation of Satara, in 1849, Jath and Daphlapur, like other Satara Jagirs, became feudatories of the British Government. The latter has more than once interfered to adjust the pecuniary affairs of the Jath Jagir, and in consequence of numerous acts of oppression on the part of the then ruler, was compelled to assume direct management from 1874 to 1885. The Chief of Jath, who belongs

to the Maratha caste, is a Treaty Chief and ranks as a first class Sardar. He holds a sanad of adoption, and the succession follows the rule of primogeniture. The small State of Daphlapur is managed by a Rani, aided by her *karbhari*. The gross revenue of the Agency is about 3 lakhs chiefly derived from land revenue. The Jath State pays to the British Government Rs. 8,400 per annum in lieu of a horse contingent and Rs. 4,840 on account of Sardeshmukhi rights.

*Political Agent:* Jahangir Kaikhosru Navroji Kabraji, Collector of Bijapur.

**Cutch.**—The State is bounded on the north and north-west by Sind, on the east by the Palanpur Agency, on the south by the Peninsula of Kathiawar and the Gulf of Cutch and the south-west by the Indian Ocean. Its area, exclusive of the great salt marsh called the Rann of Cutch, is 7,616 square miles. The capital is Bhuj, where the ruling Chief (the Rao) His Highness Maha Rao Sri Khengarji Savai Bahadur, G.C.I.E., resides. From its isolated position, the special character of its people, their peculiar dialect, and their strong feeling of personal loyalty to their ruler, the peninsula of Cutch has more of the elements of a distinct nationality than any other of the dependencies of Bombay. The earliest historic notices of the State occur in the Greek writers. Its modern history dates from its conquest by the Sind tribe of Samma Rajputs in the fourteenth century. The section of the Sammas forming the ruling family in Cutch were known as the Jadejas or 'children of Jada.' The British made a treaty with the State in 1815, but three years after the conduct of the ruler made it necessary to occupy the capital and depose him. There is a fair proportion of good arable soil in Cutch, and wheat, barley and cotton are cultivated. Both iron and coal are found but are not worked. Cutch is noted for its beautiful embroidery and silverwork and its manufactures of silk and cotton are of some importance. Trade is chiefly carried by sea. The ruling chief is the supreme authority. A few of the Bhayads are invested with jurisdictional powers in varying degrees in their own Estates and over their own ryots. A notable fact in connection with the administration of the Cutch State is the number and position of the Bhayad. These are Rajput nobles forming the brotherhood of the Rao. They were granted a share in the territories of the ruling chief as provision for their maintenance and are bound to furnish troops on an emergency. The number of these chiefs is 137, and the total number of the Jadeja tribe in Cutch is about 16,000. The British military force having been withdrawn from Bhuj, the State now pays Rs. 82,257 annually to the British Government. The military force consists of about 1,000 in addition to which, there are some irregular infantry, and the Bhayads could furnish on requisition a mixed force of four thousand.

*Political Agent:* Lt.-Col. C. F. Harold.

**Dharwar Agency.**—This comprises only the small State of Savanur. The founder of the reigning family who are Mahomedans of Pathan origin was a jagirdar of Emperor Aurangzeb. At the close of the last Maratha War the Nawab of Savanur whose conduct had been exceptionally loyal was confirmed in his possessions

by the British Government. The State pays no tribute. The principal crop is cotton. The area is 70 square miles and population 17,909. The revenue is about one lakh. The present chief is Lieut. Abdul Majidkhan Dilerjang Bahadur.

*Political Agent, E. G. Turner, I.C.S.*

**Kaira Agency.**—This includes only the State of Cambay at the head of the Gulf of the same name. Cambay was formerly one of the chief ports of India and of the Anhilvada Kingdom. At the end of the thirteenth century it is said to have been one of the richest towns in India; at the beginning of the sixteenth century also it formed one of the chief centres of commerce in Western India. Factories were established there by the English and the Dutch. It was established a distinct State about 1730, the founder of the present family of Chiefs being the last but one of the Mahomedan Governors of Gujarat. The present Nawab is His Highness Mirza Hussein Yawar Khan who is a Shiah Mogul of the Najumisani family of Persia, and was born on the 16th May, 1911. His father, the late Nawab Jaffar Ali Khan, died on 21st January, 1915, leaving him a minor. The State is therefore under British Administration. The State pays a tribute of Rs. 21,924 to the British Government. Wheat and cotton are the principal crops. There is a broad gauge line from Cambay to Petlad, connecting with the B. B. & C. I. Railway at Anand. Cambay is a first class State having full jurisdiction. Revenue is about six lakhs. The area of the State is 350 square miles, population 72,656.

*Political Agent, J. Ghosal, I.C.S.*

**Kathiawar Agency.**—Kathiawar is the peninsula or western portion of the Province of Gujarat, Bombay. Its extreme length is about 220 miles and its greatest breadth about 165 miles, the area being 23,445 square miles. Of this total about 20,882 square miles with a population of 2,496,057 is the territory forming the Political Agency subordinate to the Government of Bombay, established in 1822, having under its control nearly 200 separate States whose chiefs divided amongst themselves the greater portion of the peninsula. The Kathiawar Agency is divided for administrative purposes into four prants or divisions—Jhalawar, Halar, Sorath and Gohelwar—and the States have since 1863 been arranged in seven classes. Since 1822 political authority in Kathiawar has been vested in the Political Agent subordinate to the Government of Bombay. In 1902 the designations of the Political Agent and his Assistants were changed to those of Agent to the Governor and Political Agents of the prants. Before 1863, except for the criminal court of the Agent to the Governor, established in 1831, to aid the Darbars of the several States in the trial of heinous crimes, interference with the judicial administration of the territories was diplomatic, not magisterial; and the criminal jurisdiction of the first and second-class chiefs alone was defined. In 1863, however, the country underwent an important change. The jurisdiction of all the chiefs was classified and defined: that of chiefs of the first and second classes was made plenary; that of lesser chiefs was graded in a diminishing scale. The four Political Agents of the prants resident in the four divisions of Kathiawar,

now exercise residuary jurisdiction with large civil and criminal powers. Each Political Agent of a prant has a deputy, who resides at the headquarters of the prant or division, and exercises subordinate civil and criminal powers. Serious criminal cases are committed by the deputies to the court of the Agent to the Governor, to whom also civil and criminal appeals lie. The Agent to the Governor is aided in this work by an officer known as the Political Agent and Judicial Assistant, who is usually a member of the Indian Civil Service. Appeals from his decisions lie direct to the Governor of Bombay in Council in his executive capacity. Two Deputy-Assistants also help the Agent.

*Agent to the Governor in Kathiawar, Evan Maconochi, I.C.S.*

**Bhavnagar.**—This State lies at the head and west side of the Gulf of Cambay. The Gohel Rajputs, to which tribe the Chief of Bhavnagar belongs, are said to have settled in the country about the year 1260, under Sajakji from whose three sons—Ranoji, Saranji and Shahji—are descended respectively the chiefs of Bhavnagar, Lathi and Palitana. An intimate connexion was formed between the Bombay Government and Bhavnagar in the eighteenth century when the chief of that State took pains to destroy the pirates which infested the neighbouring seas. The State was split up when Gujarat and Kathiawar were divided between the Peshwa and the Gaekwar, but the various claims over Bhavnagar were consolidated in the hands of the British Government in 1807. The State pays an annual tribute of Rs. 1,28,060 to the British Government, Rs. 3,581-8-0 as Peshkashi to Baroda, and Rs. 22,858 as Zorabai to Junagadh. H. H. Maharaja Raol Shri Bhavsinhji, K.C.S.I., is the supreme and final authority in the State. The general administration is conducted under His Highness's directions by the Dewan (Mr. M. A. Tana), who is assisted by the Naib Dewan, the Personal Assistant and the Judicial Assistant. One noteworthy feature in the administration is the complete separation of judicial from executive functions and the decentralisation of authority is another. The authority and powers of all the Heads of Departments have been clearly defined, and each within his own sphere is independent of the others, being directly responsible to the Dewan.

The chief products of the State are grain, cotton and salt. The chief manufactures are oil, copper and brass vessels and cloth. The Bhavnagar State Railway is 205 miles in length, and the management of it undertakes also the working of the Dhrangadhra State Railway for a length of 40 miles. The capital of the State is the town and port of Bhavnagar, which has a good and safe harbour for shipping and carries on an extensive trade as one of the principal markets and harbours of export for cotton in Kathiawar. Bhavnagar supports 300 Imperial Service Lancers and 282 Infantry or Armed Police.

**Dhrangadhra State** is an uneven tract of land (intersected by small streams) which consists of hilly and rocky ground where stone is quarried. The chief of Dhrangadhra belongs to the Jhala tribe, originally a sub-division of the Makvana family. This tribe is of

great antiquity, and is said to have entered Kathiawar from the north establishing itself first at *Patli* in the Ahmedabad District, thence moving to *Halvad* and finally settling in its present seat. The greater part of this territory was probably annexed at one time by the Mahomedan rulers of Gujarat. Subsequently, during the reign of the Emperor Aurangzebe (1658–1707), the sub-division of *Halvad*, then called *Muhammamnagar*, was restored to the *Jhala* family. The petty States of *Limbdi*, *Wadhwan*, *Chuda*, *Sayla*, and *Than-Lakhtar* in *Kathiawar* are offshoots from *Dhrangadhra*; and the house of *Wankaner* claims to be descended from an elder branch of the same race. His Highness the Maharana *Shri Ghanashyamsinhji* is the ruling chief, who is the head of the *Jhala* Rajput family. The State pays a tribute of Rs. 40,071 to the British Government, and Rs. 4,008 to *Junagadh* State. The administration is conducted under the Maharaja's directions by the *Dewan* (*Mansinh S. Jhala*). The principal crops are cotton and grain. The Capital town is *Dhrangadhra*, a fortified town, 75 miles west of *Ahmedabad*.

**Gondal State.**—The Chief of *Gondal* is a Rajput of the *Jadeja* stock with the title of *Thakur Sahib*, the present Chief being *H. H. Shri Bhagvat Sinhji*, G.C.I.E. The early founder of the State, *Kumbhoji I.*, had a modest estate of 20 villages. *Kumbhoji II.*, the most powerful Chief of the House, widened the territories to almost their present limits by conquest; but it was left to the present ruler to develop its resources to the utmost, and in the words of Lord Reay, Governor of *Bombay*, by its "importance and advanced administration" to get it recognised as a First Class State. The State pays a tribute of Rs. 1,10,721. The chief products are cotton and grain and the chief manufactures are cotton and woollen fabrics and gold embroidery. *Gondal* has always been pre-eminent amongst the States of its class for the vigour with which public works have been prosecuted, and was one of the earliest pioneers of railway enterprise in *Kathiawar*, having initiated the *Dhasa-Dhoraji* line: it subsequently built other lines in partnership with other Native States in *Kathiawar*. There are no export and import dues, the people being free from taxes and dues. The Capital is *Gondal*, a fortified town on the line between *Rajkot* and *Jetalsar*.

**Junagadh State.**—This State has an area of 3,284 square miles and is bounded on the north by the *Bardas* and *Halal* and on the west and south by the *Arabian Sea*. The river *Saraswati*, famous in the sacred annals of the *Hindus*, passes through the State. A sparsely wooded tract called the *Gir*, is contained in the State and is well known as the last haunt in *India* of the *Lion*. Until 1472, when it was conquered by *Sultan Mahmud Begra* of *Ahmedabad*, *Junagadh* was a Rajput State, ruled by Chiefs of the *Chudasama* tribe. During the reign of the Emperor *Akbar* it became a dependency of *Delhi*, under the immediate authority of the *Mughal* Viceroy of *Gujarat*. About 1735, when the representative of the *Mughals* had lost his authority in *Gujarat*, *Sher Khan Babi*, a soldier of fortune, expelled the *Mughal* Governor, and established his own rule. The ruler of *Junagadh* first entered

into engagements with the British Government in 1807. The Chief bears the title of *Nawab* the present *Nawab* being tenth in succession from the founder of the family. He is His Highness *Mahabat Khan*, who was born in 1900 and succeeded in 1911. The agricultural products are cotton, shipped in considerable quantities from *Veraval* to *Bombay*, wheat and other grains. The coast line is well supplied with fair weather harbours. The State pays a tribute of Rs. 65,604 to the *Gaekwar* of *Baroda* and the British Government, but the *Nawab* receives contributions, called *zot-talbi*, amounting to Rs. 92,421 from a number of chiefs in *Kathiawar*—a relic of the days of Mahomedan supremacy. The State maintains 100 Imperial Service Lancers. The Capital is *Junagadh*, situated under the *Girnar* and *Datar* hills, which is one of the most picturesque towns in *India*, while in antiquity and historical interest it yields to none. The *Uparkot*, or old citadel, contains interesting Buddhist caves, and the whole of the ditch and neighbourhood is honeycombed with caves or their remains. There are a number of fine modern buildings in the town.

*Administrator*, H. D. Rendall, I.C.S.

**Navanagar State.** on the southern shore of the *Gulf of Cutch*, has an area of 3,791 square miles. The *Jam* of *Navanagar* is a *Jadeja* Rajput by caste, and belongs to the same family as the *Rao* of *Cutch*. The *Jadejas* originally entered *Kathiawar* from *Cutch*, and dispossessed the ancient family of *Jethwas* (probably a branch of *Jats*) then established at *Ghumli*. The town of *Navanagar* was founded in 1540. The present *Jam* *Sahib* is the well-known cricketer, *H. H. Jam Sahib Shri Ranjitsinhji Vibhaji*, who was born in 1872 and succeeded in 1907. The principal products are grain and cotton, shipped from the ports of the State. A small pearl fishery lies off the coast. The State pays a tribute of Rs. 1,20,093 per annum jointly to the British Government, the *Gaekwar* of *Baroda* and the *Nawab* of *Junagadh*. The State maintains a squadron of Imperial Service Lancers. The Capital is *Navanagar* (or *Jamnagar*) a flourishing place, nearly 4 miles in circuit, situated 5 miles east of the port of *Bedi*. Population, 349,400. Revenue nearly Rs. 40 lakhs.

*Dewan*, K. B. Merwanji Pestonji.

**Kolaba Agency.**—This Agency includes the State of *Janjira* in the *Konkan*, a country covered with spurs and hill ranges and much intersected by creeks and backwaters. The ruling family is said to be descended from an Abyssinian in the service of one of the *Nizam* Shahi Kings of *Ahmednagar* at the end of the fifteenth century. The most noticeable point in its history is the successful resistance that it alone, of all the states of Western *India*, made against the determined attacks of the *Marathas*. The British on succeeding the *Marathas* as masters of the *Konkan* refrained from interfering in the internal administration of the State. The chief is a *Sunni* Mahomedan, by race a *Sidi* or Abyssinian, with a title of *Nawab*. He has a sanad guaranteeing succession according to Mahomedan law and pays no tribute. Till 1868 the State enjoyed singular independence, there being no Political

gent, and no interference whatever in its internal affairs. About that year the maladministration of the chief, especially in matters of police and criminal justice, became flagrant; those branches of administration were in consequence taken out of his hands and vested in a Political Agent. The present ruler is H. H. Nawab Sidi Sir Ahmed Khan, G.C.I.E., who was born in 1862. The heir-apparent is Sidi Mahommed Khan, born on the 7th March 1914. The area of the State is 377 square miles, and the population 101,120. The average revenue is 6 lakhs. The State maintains a military force of 228 and an Imperial Service detachment of 29. The capital is Janjira, 44 miles south of Bombay Island. The Chief exercises full powers in Criminal, Civil and Revenue matters of the State including Jafarabad, a dependency of the Janjira State in Kathiawar. He is entitled to a dynastic salute of 11 guns.

**Kolhapur Agency.**—Kolhapur is a State with an area of 3,217 square miles and population of 833,441. Subordinate to Kolhapur are nine feudatories, of which the following five are important: Vishalgarh, Bavda, Kagal (senior), Kapsi and Ichalkaranji. The present ruling chief Col. Sir Shahu Chhatrapati Maharaja, G.C.S.I., G.C.I.E., G.C.V.O., traces his descent from a younger son of Shivaji, founder of the Maratha power. The prevalence of piracy from the Kolhapur port of Malvan compelled the Bombay Government to send expeditions

against Kolhapur in 1785, and again in 1792, when the Raja agreed to give compensation for the losses which British merchants had sustained since 1785, and to permit the establishment of factories at Malvan and Kolhapur. Internal dissensions and wars with neighbouring States gradually weakened the power of Kolhapur. In 1812 a treaty was concluded with the British Government, by which, in return for the cession of certain ports, the Kolhapur Raja was guaranteed against the attacks of foreign powers; while on his part he engaged to abstain from hostilities with other States, and to refer all disputes to the arbitration of the British Government. The principal articles of production are rice, jawar and sugar-cane and the manufactures are coarse cotton and woollen cloths, pottery and hardware. The State pays no tribute, and supports a military force of 690. The nine feudatory estates are administered by their holders. Except in the case of two whose holders are minors. Kolhapur proper is divided into six pethas or talukas and four mahals and is managed by the Maharaja, who has full powers of life and death. The Southern Mahratta Railway passes through the State and is connected with Kolhapur City by a line which is the property of the State.

*Resident and Senior Political Agent for Kolhapur and the Southern Mahratta Country—*  
Lt.-Col. F. W. Wodehouse, C.I.E.

#### Southern Maratha Country States.—The Agency consists of the following eight States:—

Name of State.	Area in square miles.	Population.	Tribute to British Government.	Average revenue.
			Rs.	Rs.
Sangli .. .. .	1,112	227,146	1,35,000	10,75,756
Miraj (Senior) .. .. .	330	80,281	12,557	8,12,980
Miraj (Junior) .. .. .	210	36,497	7,388	2,55,283
Kurundwad (Senior) .. .. .	185	38,376	....	1,54,369
Kurundwad (Junior) .. .. .	114	34,084	9,618	1,73,669
Jamkhandi .. .. .	524	100,304	20,515	9,41,105
Mudhol .. .. .	368	62,831	2,671	3,52,916
Ramdrug .. .. .	169	36,610	....	1,50,729
Total ..	3,021	616,121	1,87,749	34,16,787

**Mahi Kantha.**—This group of States has a total area of 3,124 square miles and a population of 412,631 including that of Idar which is 202,811. The revenue is about 14 lakhs. The Agency consists of the first class State of Idar and 51 small States. The Native State of Idar covers more than half the territory. It has an area of 1,669 square miles and an average revenue of Rs. 8,65,345; eleven other States are of some importance; and the remainder are estates belonging to Rajput or Koli Thakurs, once the lawless feudatories of Baroda, and still requiring the anxious supervision of the Political Officer. H. H. Major-General Sir Partab Singh, a Rajput of the Rathor Clan, having been appointed regent of the State of Jodhpur, resigned the gadi of Idar in June 1911 and was succeeded by his adopted son Daulatsinhji, who is aged 39. His Highness has been on active

service. Many relatives of the Maharaja and feudal chiefs whose ancestors helped to secure the country for the present dynasty, now enjoy large estates on service tenures, and there are numerous petty chiefs or *bhumias* who have held considerable estates from the time of the Raos of Idar, or earlier, and are under no obligation of service. The revenues of the State are shared by the Maharaja with these feudal chiefs. The Maharaja receives Rs. 52,427 annually on account of Khichdi and other Raj Haks from its subordinate Sardars, the tributary Talukas of the Mahi Kantha Agency and others, and pays Rs. 30,340 as tribute to the Gaekwar of Baroda through the British Government. The subordinate Sardars of Idar, known locally as *pattawats*, hold their estates on condition of military service, the quota being three horsemen for every 1,000

Rupees of Revenue; but for many years this service has not been exacted and no military force is maintained at present. The second class States are Polo, to the rulership of which the succession is disputed, and Danta, of which the ruler is Maharana Mamirsingji.

**Political Agent**—Lt.-Col. J. R. B. Graham Carter.

**Nasik Agency.**—This consists of one State Surgana, lying in the north-west corner of the Nasik District. Surgana has an area of 360 square miles and a population of 15,180. The ruling chief is Prataprav Shankarrao Deshmukh, who is descended from a Maratha Pawar family. He rules the State subject to the orders of the Collector of Nasik. The revenue of the State is about Rs. 28,000.

**Palanpur Agency.**—This group of States in Gujarat comprises two first class States, Palanpur and Radhanpur, and a few minor States and petty talukas. Its total area is 6,393 square miles and the population is 515,092. The gross revenue is about 14½ lakhs. The territory included in the Agency has, like the more central parts of Gujarat, passed during historical times under the sway of the different Rajput dynasties of Anhilvada, the early Khilji and Tughlak Shahi dynasties of Delhi, the Ahmedabad Sultans, the Mughal Emperors, the Mahrattas, and lastly the British. The State from which the Agency takes its name is under the rule of H. H. Sir Sher Muhammad Khan, G.C.I.E., who is entitled Nawab and Dewan of Palanpur. He is descended from the Lohanis, an Afghan tribe who appeared in Gujarat in the fourteenth century. The connection of the British Government with the State dates from 1819 in which year the chief was murdered by a body of nobles. Two high roads from Ahmedabad pass through the State and a considerable trade in cotton cloth, grain, sugar and rice is carried on. The State maintains a consular force of 600 and pays tribute of Rs. 38,000 to the Gaekwar of Baroda. The capital is Palanpur, situated at the junction of the Palanpur-Deesa branch of the B. B. & C. I. Railway. It is a very old settlement of which mention was made in the eighth century.

**Political Agent**—Lt.-Col. N. S. Coghlin.

**Radhanpur** is a State, with an area of 1,150 square miles, which is now held by a branch of the Babi family, who since the reign of Humayun have always been prominent in the annals of Gujarat. The present chief is H. H. Jalal-ud-din Khanji, the Nawab of Radhanpur. He has powers to try his own subjects even for capital offences without permission from the Political Agent. The State maintains a military force of 200. The principal products are cotton, wheat and grain. The capital is Radhanpur town, a considerable trade centre for Northern Gujarat and Cutch.

**Rewa Kantha Agency.**—This Agency, with an area of 4,956 square miles and a population of 665,099, comprises 61 States, of which Rajpipla is a first class State, 5 are second class, one is third class and the rest are either petty States or talukas. Among those petty States are Sanjeli in the north, Bhadarva and Umeta in the west, Narukot in the south-east, and

two groups of Mehwas. The 26 Sankheda Mehwas petty estates lie on the right bank of the Narbada, while the 24 Pandu Mehwas petty estates including Dorka, Anghad and Raika, which together form the Dorka Mehwas are situated on the border of the Mahl.

The following are the statistics of area and population for the principal States:—

State.	Area in square miles.	Population.
Balasnor .. .. .	189	40,563
Barlya .. .. .	813	115,350
Chhota Udaipur .. .. .	873	103,639
Lunavada .. .. .	388	75,998
Narukot (Jambhughoda) ..	143	8,485
Rajpipla .. .. .	1,517	161,588
Sunth .. .. .	394	59,350
Other Jurisdictional States, Civil Stations and Thana Circles .. .. .	639	100,126

Under the first Anhilvada dynasty (746-961), almost all the Rewa Kantha lands except Champaner were under the government of the Baryas, that is, Koli and Bhil chiefs. In the eleventh, twelfth and thirteenth centuries chiefs of Rajput or part Rajput blood, driven south and east by the pressure of Muhammadan invasions, took the place of the Koli and Bhil leaders. The first of the present States to be established was the house of the Raja of Rajpipla.

**Political Agent**—W. W. Smart, I.C.S.

**Rajpipla.**—This State lies to the south of the Narbada. It has an area of 1,517 square miles, and largely consists of the Rajpipla Hills which form the watershed between the Narbada and Tapi rivers. The family of the Raja of Rajpipla, H. H. Maharana Shri Vijayasinghi is said to derive its origin from a Rajput of the Gohel clan. The State pays an annual tribute of Rs. 50,000 to the Gaekwar of Baroda. Cotton is the most important crop in the State. In the south there are valuable teak forests. The capital is Nandod, which is connected with Anklesvar by railway built by the State.

**Satara Jagirs.**—Under this heading are grouped the following six States:—

State.	Area in sq. miles.	Population.	Revenue in lakhs.
Aundh .. .. .	501	68,995	3
Phaltan .. .. .	397	55,996	2
Bhor .. .. .	925	144,601	5
Akalkot .. .. .	498	89,082	4
Jath .. .. .	884	69,810	2
Daphlapur .. .. .	96	8,833	20

These were formerly feudatory to the Raja of Satara. In 1849 five of them were placed under the Collector of Satara, and Akalkot under the Collector of Sholapur. Subsequently, the Jagir of Bhor was transferred to the Collector of Poona and Jath and Daphlapur to the Southern Mahratta country. The last two are now under the Collector of Bijapur. The ruling chiefs are as follows :—

State.	Ruling Chiefs.	Tribute to British Government.
		Rs.
Aundb ..	Bhavanrav Shrinivasrao <i>alias</i> Baba Saheb, Pant Pratmidhi.	....
Phaltan ..	Mudhojirav Janiav Nimbalkai .. .. .	9,600
Bhor ..	H. H. Shankarrav Chinnaji, Pant Sachiv .. .. .	4,684
Akalkot ..	Fatehsinh Shahai Raje Bhonsle <i>alias</i> Bapu Saheb .. ..	14,592
Jath ..	Ramrav Amritrav <i>alias</i> Aba Saheb Daphle .. .. .	6,400
Daphlapur ..	Rani Bai Saheb Daphle, widow of Ramchandrarav Venkatarav Chavan Daphle.	....

**Savantwadi.**—This State has an area of 925 square miles and population of 217,240. The average revenue is 5½ lakhs. It lies to the north of the Portuguese territory of Goa, the general aspect of the country being extremely picturesque. Early inscriptions take the history of the State back to the sixth century. So late as the nineteenth century the ports on this coast swarmed with pirates and the country was very much disturbed. The present chief is Khem Savant V, *alias* Bapu Saheb Bhonsle. Rice is the principal crop of the State, and it is rich in valuable teak. The sturdy Marathas of the State are favourite troops for the Indian Army and supply much of the immigrant labour in the adjacent British districts. The Capital is Savantwadi, also called Sundar Vadi, or simply Vadi.

**Sholapur Agency.**—This contains the State of Akalkot which forms part of the tableland of the Deccan. It has an area of 498 square miles and a population of 80,082. In the beginning of the eighteenth century the Akalkot territory, which had formerly been part of the Mussulman kingdom of Ahmednagar was granted by the Raja of Satara to a Maratha Sardar, the ancestor of the present chief, subject to the supply of a contingent of horse. In 1849 after the annexation of Satara, the Akalkot Chief became a feudatory of the British Government.

**The Sukkur Agency.**—This includes Khairpur State, a great alluvial plain in Sind. It has an area of 6,050 square miles and a population of 225,788, and revenue of 19 lakhs. The

present chief, H. H. Mir Sa Imam Buksh Khan Talpur, C.C.I.E., belongs to a Baloch family called Talpur. Previous to the accession of this family on the fall of the Kalhora dynasty of Sind in 1783, the history of Khairpur belongs to the general history of Sind. In that year Mir Fateh Ali Khan Talpur established himself as Rans or ruler of Sind; and subsequently his nephew, Mir Sohrab Khan Talpur, founded the Khairpur branch of the Talpur family. In 1832 the individuality of the Khairpur State, as separate from the other Talpur Mirs in Sind, was recognised by the British Government in a treaty, under which the use of the river Indus and the roads of Sind were secured to the British. The chief products of the State are oil-seeds, ghee, hides, tobacco, fuller's earth, carbonate of soda, cotton, wool and grain. The manufactures comprise cotton fabrics and various kinds of silverware and metal work. There is an industrial school at the capital where lacquer work, carpets, pottery, etc., are produced. The Railway from Hyderabad to Rohri runs through the whole length of the State. The rule of the Mir is patriarchal, but many changes have been made in recent years introducing greater regularity of procedure into the administration. The Wazir, an officer lent from British service, conducts the administration under the Mir. The State supports a military force of 564 including an Imperial Service Camel and Baggage Corps which is 139 strong and is serving at the front. Revenue, 19 lakhs.

**Political Agent:** The Collector of Sukkur  
E. L. Moysey, I.C.S.

**Surat Agency.**—This is a small group of three second class States under the superintendence of the Collector of Surat, W. F. Hudson.

State.	Ruling Chiefs.	Area in sq. miles.	Population.
Dharampur ..	Maharana Shri Mohandevji Narayandevji.. .. .	704	114,995
Bansda ..	Maharaval Shri Indrasinhji Pratapsinhji .. .. .	215	44,594
Sachin ..	Nawab Sidi Ibrahim Muhammad Yakut Khan Mubazarat Daula Nasrat Jung Bahadur.	42	18,908



The joint revenue of these states is 16½ lakhs. Tribute is paid to the British Government of Rs. 9,154. There is also attached to this Agency a tract of country known as the Dangs, which has an area of 999 square miles and a population of 29,353 and a revenue of Rs. 30,000. The country is divided into 14 Dangs or States of very unequal area, each under the purely nominal rule of a Bhil Chief with the title of Raja, Naik, Pradhan or Powar.

**Thana Agency.**—This includes the State of Jawhar, in the Thana District, on a plateau above the Konkan plain. It has an area of 310 square miles and a population of 53,480

and revenue of 2½ lakhs. Up to 1294, the period of the first Mahomedan invasion of the Deccan, Jawhar was held by a Varli, not a Koli chief. The first Koli chief, obtained his footing in Jawhar by a device similar to that of Dido, when she asked for and received as much land as the hide of a bull would cover. The Koli chief cut a hide into stripes, and thus enclosed the territory of the State. The present chief is Raja Krishnashah Patangshah who administers the State, assisted by a Karbhar under the supervision of the Collector of Thana, S. M. Bharucha, who is Political Agent of the State.

## UNDER THE GOVERNMENT OF BENGAL.

**Cooch Behar.**—This State, which at one time comprised almost the whole of the Northern Bengal, Assam and Bhutan, is a low-lying plain in North Bengal. It has an area of 1,307 square miles, a population of 5,93,052 and revenue of nearly 30 lakhs. The ruling chiefs H. II. Maharaja Jitendra Narayan Bhup Bahadur who married Rani Indira Devi, eldest daughter of H. II Maharaja Rao Gackwar of Baroda in 1913 and succeeded his brother Maharaja Raj Rajendra Narayan in the same year. His family is according to some ethnologists of either Dravidian or Mongolian origin or a mixture of both types, but according to others of Kshatriya origin. H. II. administers the State with the assistance of the State Council of which he is President. Cooch Behar once formed part of the famous kingdom of Kamrup. British connection with it began in 1772 when owing to invasions of the Bhutias, the assistance of the East India Company was invited. The chief products of the State are rice, jute and tobacco. It maintains a military force of 194. The capital is Cooch Behar, which is reached by the Cooch Behar State Railway, a branch from the Eastern Bengal State Railway system.

**Hill Tippera.**—This State lies to the south of the district of Sylhet and consists largely of hills covered with bamboo jungles. It has an area of 4,086 square miles and a population of 229,613. The revenue from the State is about 10 lakhs and from the Zemindari in British territory a slightly smaller sum. The

present Raja is Birendra Kishore Deb Barman Manikya, who is a Kshatriya by caste and comes of the Lunar race. The military prestige of the Tippera Rajas dates back to the fifteenth century and a mythical account of the State takes the history to an even earlier date. Both as regards its constitution and its relations with the British Government, the State differs alike from the large Native States of India, and from those which are classed as tributary. Besides being the ruler of Hill Tippera, the Raja also holds a large landed property called Chakra Roshnabad, situated in the plains of the Districts of Tippera, Nao-khali and Sylhet. This estate covers an area of 600 square miles, and is held to form with the State an indivisible Raj. Disputes as to the right of succession have occurred on the occasion of almost every vacancy in the Raj, producing in times gone by disturbances and domestic wars, and exposing the inhabitants of the hills to serious disorders and attacks from the Kukis, who were always called in as auxiliaries by one or other of the contending parties. The principles which govern succession to the State have recently, however, been embodied in a sanad which was drawn up in 1904. The chief products of the State are rice and cotton, the traffic being carried chiefly by water. The administration is conducted by the Minister at Agartala assisted by the Dewan.

*Political Agent:* J. Bartley, I.C.S.

## UNDER THE GOVERNMENT OF BIHAR AND ORISSA.

Under this Government there are the Chota Nagpur political States of Kharsawan and Sarakela, and the Orissa feudatory States, 24 in number. The total area is 28,648 square miles, and the total population 3,942,972. The revenue is about 70 lakhs. The inhabitants are hill-men of Kolarian or Dravidian origin, and their condition is still very primitive. The chief of Kharsawan belongs to a junior branch of the Porahat Raja's family. The State first came under the notice of the British in 1793, when, in consequences of disturbances on the frontier of the old Jungle Mahals, the Thakur of Kharsawan and the Kunwar of Sarakela were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present sanad was granted in 1899. He exercises all admini-

subject to the control of the Deputy Commissioner of Singhbhum and the Commissioner of Chota Nagpur. The Bengal Nagpur Railway runs through a part of the State. The adjoining State of Sarakela is held by the elder branch of the Porahat Raja's family.

**Orissa Feudatory States.**—This group of 24 dependent territories is situated between the Mahanadi Delta and the Central Provinces, and forms the mountainous background of Orissa. The names of the individual States are Athgarh, Talcher, Mayurbhanj, Nigiri, Keonjhar, Pal Lahara, Dhenkanal, Athmalik, Hindol, Narsinghpur, Baramba, Tigirra, Khanpara, Nayagarh, Ranpur, Daspalla and Baud. To these there were added in 1905 the following States: Bamra, Rairakhol, Sonpur, Patna and Kalahandi from the Central Provinces, and Gangpur and Bonal from the Chota Nagpur States. The total population in 1915 was

3,798,088 with a revenue of about 60 lakhs. The Feudatory States have no connected or authentic history. Comprising the western and hilly portion of the province of Orissa they were never brought under the central government, but from the earliest times consisted of numerous petty principalities which were more or less independent of one another. They were first inhabited by aboriginal races, who were divided into innumerable communal or tribal groups each under its own chief or headman. These carried on incessant warfare with their neighbours on the one hand and with the wild beasts of the forests on the other. In course of time their hill retreats were penetrated by Aryan adventurers, who gradually overthrew the tribal chiefs and established themselves in their place. Tradition relates how these daring interlopers, most of whom were Rajputs from the north, come to Puri on a pilgrimage and remained behind to found kingdoms and dynasties. It was thus that Jai Singh became ruler of Mayurbhanj over 1,300 years ago, and was succeeded by his eldest son, while his second son seized Keonjhar. The chiefs of Baud and Daspatha are said to be descended from the same stock; and a Rajput origin is also claimed by the Rajas of Athmalik, Narsinghpur, Pal Lahara, Talcher and Tigirila. Nayarhar, it is alleged, was founded by a Rajput from Rewah, and a scion of the same family was the ancestor of the present house of Khandpara. On the other hand, the chiefs of a few States, such as Athgarh, Baramba and Dhenkanal, owe their origin to favourites or distinguished servants of the ruling sovereigns of Orissa. The State of Ranpur is believed to be the most ancient, the list of its chiefs cov-

ering a period of over 3,600 years. It is noteworthy that this family is admittedly of Khond origin, and furnishes the only known instance in which, amid many vicissitudes, the supremacy of the original settlers has remained intact. The States acknowledged the suzerainty of the paramount power and were under an implied obligation to render assistance in resisting invaders; but in other respects neither the ancient kings of Orissa nor their successors, the Mughals and Marathas, ever interfered with their internal administration. All the States have annals of the dynasties that have ruled over them; but they are made up in most part of legend and fiction and long genealogical tables of doubtful accuracy, and contain very few features of general interest. The British conquest of Orissa from the Marathas, which took place in 1803, was immediately followed by the submission of ten of the Tributary States the chiefs of which were the first to enter into treaty engagements.

The staple crop in these States is rice. The forests in them were at one time among the best timber producing tracts in India, but until lately forest conservancy was practically unknown. The States have formed the subject of frequent legislation of a special character. The relations with the British Government are governed mainly by the sanads granted in similar terms to all the chiefs in 1894. They contain ten clauses reciting the rights, privileges, duties and obligations of the chiefs, providing for the settlement of boundary disputes, and indicating the nature and extent of the control of the Political Agent.

*Political Agent:* L. E. B. Cobden-Ramsay, C.I.E., I.C.S.

## UNDER THE GOVERNMENT OF THE UNITED PROVINCES.

Three States: Rampur, Tehri and Benares are included under this Government:—

State.	Area Sq. Miles.	Popu- lation.	Revenue in lakhs.
Rampur ..	892	531,898	45
Tehri (Garhwal) ..	4,200	299,853	6
Benares ..	988	....	....

**Rampur** in Rohilkhand is a level fertile tract of country. Its early history is that of Rohilkhand. The adopted son of a Rohilla, who had distinguished himself in the Maratha wars, obtained the title of Nawab and the grant of the greater part of Rohilkhand in 1790. Subsequently the State was divided amongst his sons and on the cession of Rohilkhand to the British Government in 1801 the family holding Rampur were confirmed in their possessions. The Nawab at the time of the Mutiny received a grant of land for his unswerving loyalty. The present Nawab is Colonel H. H. Sir Syed Mohammad Hamid Ali Khan Bahadur, G.C.I.E., G.C.V.O., A.-D.C., who was born in 1875 and succeeded in 1889. He is a descendant of the famous Sadats of Bahera, the sole surviving representative of the Rohilla power and is the premier chief in the United Provinces. His eldest son, Sahebzada Syed Raza Ali Khan

Bahadur, is the heir apparent. Since 1889 a native official of the United Provinces, called the Minister, has been lent to the State. He presides over a Legislative Committee first formed in 1902. The principal crops are maize, wheat, rice and sugar cane. The most important industry is the weaving of cotton cloths. The Oudh and Rohilkhand Railway crosses the State. Two squadrons of Imperial Service cavalry are maintained, and a battalion of Imperial Service Infantry. The capital is Rampur on the left bank of the Kosi, 851 miles by rail from Calcutta. Income, 45 lakhs. Area, 892 square miles. Population, 531,217.

*Political Agent:* The Commissioner of Rohilkhand.

**Tehri State** (or Tehri Garhwal).—This State lies entirely in the Himalayas and contains a tangled series of ridges and spurs radiating from a lofty series of peaks on the border of Tibet. The sources of the Ganges and the Jumna are in it. The early history of the State is that of Garhwal District, the two tracts having formerly been ruled by the same dynasty. Parduman Shah, the last Raja of the whole territory, was killed in battle, fighting against the Gurkhas; but at the close of the Nepalese War in 1815, his son received from the British the present State of Tehri. During the Mutiny the latter rendered valuable assistance to Government. He died in 1859

without issue, and was succeeded by his near relative Bhawani Shah; and he subsequently received a sanad giving him the right of adoption. The present Raja Lt. H. H. Narendra Shah Bahadur is a minor and is being educated at the Mayo College. The principal product is rice, grown on terraces on the hill sides. The State for its is very valuable and there is considerable export of timber. The Raja has full powers within the State. A unit of Imperial Service Sappers is maintained. The capital is Tehri, the summer capital being Pratapnagar 8,000 feet above the sea level.

*Political Agent:* the Commissioner of Kumaon.

**Benares.**—The founder of the ruling family of Benares was one Mansa Ram, who entered the service of the Governor of Benares under the Nawab of Oudh in the early eighteenth century. His son, Balwant Singh, conquered the neighbouring countries and created a big state out of them over which he ruled till 1770. Raja Chet Singh succeeded him, but was expelled by Warren Hastings in 1781. In 1794, owing to the maladministration of the estates which had accumulated under the Raja of Benares, an agreement was concluded by which the lands held by the Raja in his own right were separated from the rest of the province,

of which he was simply administrator. The direct control of the latter was assumed by the Government, and an annual income of one lakh of rupees was assured to the Raja, while the former constituted the Domains. Within the Domains the Raja had revenue powers similar to those of a Collector in a British District, which were delegated to certain of his own officials. There was thus constituted what for over a century was known as the Family Domains of the Maharaja of Benares. On the 1st of April 1911 these Domains became a State consisting of the parganas of Bhadohi (or Konrl) and Chakia (or Kera Mangraur) with the fort of Ramnagar. The Maharaja's powers are those of a ruling chief, subject to certain conditions, of which the most important are the maintenance of all rights acquired under laws in force prior to the transfer, the reservation to Government of the control of the postal and telegraph systems, of plenary criminal jurisdiction within the State over servants of the British Government and European British subjects, and of a right of control in certain matters connected with excise. The present ruler is H. H. Maharaja Sir Prabhu Narayan Singh Bahadur, G.C.I.E., who was born in 1855 and succeeded to the Estates in 1889.

## UNDER THE GOVERNMENT OF THE PUNJAB.

Under this Government there are 34 states, varying considerably in size and importance. Area, 38,532 square miles. Population (1911), 4,212,794. Revenue, about £1,000,000.

The Punjab states may be grouped under three main classes. The hill States, 23 in number, lie among the Punjab Himalayas and are held by some of the most ancient Rajput families in all India. Along the western half of the southern border lies the Muhammadan state of Bahawalpur. The remaining States, including the Sikh principalities of Patiala, Jind, Nabha, Kapurthala, Faridkot and Kalsia, and the Muhammadan chiefships of Maler Kotla, Pataudi, Loharu and Dujana, lie east of Lahore, and, with insignificant exceptions, occupy the centre of the eastern plains of the province.

The list below gives details of the area, population, and revenue of the more important states:—

Name.	Area square miles.	Population.	Revenue Approx. in lakhs.
Bahawalpur ..	15,000	780,394	27
Chamba ..	3,216	134,351	7
Faridkot ..	642	130,374	8
Jind ..	1,259	271,728	15
Kapurthala ..	630	268,244	25
Maler Kotla ..	167	71,144	14½
Mandi ..	1,200	181,110	5
Nabha ..	928	248,892	15
Patiala ..	5,412	1,407,659	72
Sirmur (Nahan)..	1,198	188,564	8

**Bahawalpur.**—This State, which is about 300 miles in length and about 40 miles wide,

is divided lengthwise into three great strips. Of these, the first is a part of the Great Indian Desert; the central tract is chiefly desert, not capable of cultivation, identical with the Bar or Pat uplands of the Western Punjab; and the third, a fertile alluvial tract in the river valley, is called the Sind. The ruling family claims descent from the Abbasid Khalifs of Egypt. The tribe originally came from Sind, and assumed independence during the dismemberment of the Durrani empire. On the rise of Ranjit Singh, the Nawab made several applications to the British Government for an engagement of protection. These, however, were declined, although the Treaty of Lahore in 1809, whereby Ranjit Singh was confined to the right bank of the Sutlej, in reality effected his object. The first treaty with Bahawalpur was negotiated in 1833, the year after the treaty with Ranjit Singh for regulating traffic on the Indus. It secured the independence of the Nawab within his own territories, and opened up the traffic on the Indus and Sutlej. During the first Afghan War the Nawab rendered assistance to the British and was rewarded by a grant of territory and life pension. On his death the succession was disputed and for a time the State was in the hands of the British. The present Nawab is H. H. Nawab Sadiq Muhammad Khan, who was born in 1904 and succeeded in 1907. During his minority the State is managed by a Council of Regency. The chief crops are wheat, rice and millet. The Lahore-Karachi branch of the North-Western State Railway passes through the State. The State supports an Imperial Service Silladar Camel Transport Corps consisting of 855 men and 1,144 camels, in addition to other troops. The capital is Bahawalpur, a walled town built in 1748.

*Political Agent:* Lieut.-Colonel A. C. Elliott.

**Chamba.**—This State is enclosed on the west and north by Kashmir, on the east and south by the British districts of Kangra and Gurdaspur, and it is shut in on almost every side by lofty hill ranges. The whole country is mountainous and is a favourite resort of sportsmen. It possesses a remarkable series of copper plate inscriptions from which its chronicles have been completed.

Founded probably in the sixth century by Marut, a Surajbansi Rajput, who built Brahma pura, the modern Barnaur, Chamba was extended by Meru Varma (680) and the town of Chamba built by Sahil Varma about 920. The State maintained its independence, until the Moghal conquest of India.

Under the Moghals it became tributary to the empire, but its internal administration was not interfered with, and it escaped almost unscathed from Sikh aggression. The State first came under British influence in 1846. The part, west of the Ravi, was at first handed over to Kashmir, but subsequently the boundaries of the State were fixed as they now stand, and it was declared independent of Kashmir. The present chief is H. H. Raja Sir Bhure Singh, K.C.S.I., C.I.E., who was born in 1869, and succeeded in 1904. The principal crops are rice, maize and millets. There are some valuable forests which were partly leased to Government in 1864 for a term of 99 years, but the management of them has now been retroceded to the Chamba Durbar. The mountain ranges are rich in minerals which are little worked. The principal road to Chamba town is from Pathankot, the terminus of the Amritsar Pathankot branch of the North-Western Railway. The Raja is head of the judicial department and is assisted by the Wazir-i-Wazarats. Chamba town, on the right bank of the Ravi, contains a number of interesting temples, of which that of Lakshmi Narayan, dating possibly from the tenth century, is the most famous.

**Faridkot.**—The ruling family of this sandy level tract of land belongs to the Sidhu-Barar clan of the Jats, and is descended from the same stock as the Phulkian houses. Their occupation of Faridkot and Kot Kapura dates from the time of Akbar, though quarrels with the surrounding Sikh States and internal dissensions have greatly reduced the patrimony.

The present chief, H. H. Raja Brij Indar Singh Bahadur, was born in 1890, and succeeded in 1906. During his minority the administration is carried on by a council under the presidency of an Extra Assistant Commissioner. The State supports one company of Imperial Service Sappers.

**Jind.**—The three Native States of Jind, Patiala and Nabha form collectively the Phulkian States, the most important of the Cis-Sutlej States. This area is the ancestral possession of the Phulkian houses. It lies mainly in the great natural tract called the Jangal (desert or forest), but stretches north-east into that known as the Pawadh and southwards across the Ghaggar into the Nardak, while its southernmost tract, round the ancient town of Jind, claims to lie within the sacred

limits of Kurukshetra. This vast tract is not, however, the exclusive property of the States; for in it lie several islands of British territory, and the State of Maler Kotla enters the centre of its northern border. On the other hand, the States hold many outlying villages surrounded by British territory.

The history of Jind as a separate State dates from 1783 when the confederated Sikhs captured Sirhind town and partitioned the whole Jind Province. The Maharaja of Jind, H. H. Maharaja Sir Ranbir Singh, G.C.I.E., K.C.S.I., was born in 1879 and succeeded in 1887. He is descended from the ancestors of the Phulkian family. During the Sikh War and the Mutiny the Raja of Jind was of great service to the British and was rewarded with a grant of nearly 600 square miles of land. The principal crops are wheat, barley and gram. The only industries of importance are the manufactures of gold and silver ornaments, leather and woodwork and cotton cloth. The capital is Sangru which is connected by a State Railway with the North-Western Railway. Under His Highness' Court there is a Council Wizarat which controls all the departments of the State.

**Kapurthala.**—This State consists of three detached pieces of territory in the great plain of the Doab. The ancestors of the chief of Kapurthala at one time held possessions both in the Cis and Trans-Sutlej and also in the Bari Doab. In the latter lies the village of Ahlu, whence the family springs, and from which it takes the name of Ahluwalia. Some of these States were confiscated after the first Sikh War and when the Jullundur Doab came under the dominion of the British Government in 1846, the estates north of the Sutlej were maintained in the independent possession of the Ahluwalia chieftain, conditional on his paying a commutation in cash for the service engagements by which he had previously been bound to Ranjit Singh. The Bari Doab estates have been released to the head of the house in perpetuity, the civil and police jurisdiction remaining in the hands of the British authorities. For good services during the Mutiny, the Raja was rewarded with a grant of other States in Oudh in which, however, he exercises no ruling powers, though in Oudh he is, to mark his superiority, addressed as Raja-i-Rajagan. The present chief is H. H. Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., who was born in 1872 and succeeded in 1877. He was granted the title of Maharaja as an hereditary distinction in 1911. The chiefs of Kapurthala are Sikhs. Sardar Jassa Singh was always known as Jassa Kalal; but the family claim descent from Rana Kapur, a semi-mythical member of the Rajput house of Jaisalmer, who is said to have left his home and founded Kapurthala 900 years ago. Only a small proportion of the population however are Sikhs, the majority being Mahomedans. The chief crops are wheat, gram, maize, cotton and sugar-cane. The town of Sultanpur in this State is famous for hand-painted cloths. The main line of the North-Western Railway passes through part of the State and the Grands Trunk Road runs parallel to it. A branch railway from Jullundur City to Ferozepur passes through the State. Kapurthala maintains a battalion of Imperial Service Infantry and a

small force of local troops. The capital is Kapurthala, which is said to have been founded in the eleventh century.

Agent to the Lieutenant-Governor for Kapurthala, the Commissioner of the Jullunder Division.

**Maler Kotla.**—This State consists of a level sandy plain bounded by the district of Ludhiana on the north and by Patiala territory elsewhere. The Nawabs of Maler Kotla are of Afghan descent, and originally held positions of trust in the Sirhind province under the Moghal Emperors. As the Empire sank into decay during the eighteenth century, the local chiefs gradually became independent. The result was constant feuds with the adjacent Sikh States. After the victory of Laswari, gained by the British over Sindhia in 1803 and the subjugation and flight of Holkar in 1805, when the Nawab of Maler Kotla joined the British army, the British Government succeeded to the power of the Marathas in the districts between the Sutlej and the Jumna. The final treaty which affirmed the dependence of the State on the British Government was signed after the submission of Ranjit Singh in 1809. The present Nawab is H. H. Nawab Ahmud Ali Khan Bahadur, K.C.S.I., who was born in 1881 and succeeded in 1908. He was created Hon. Major in the Indian Army for his services during the war. The chief products are cotton, sugar and opium. The State supports two double companies of Imperial Service Sappers. The capital is Maler Kotla. Revenue 14½ lakhs.

**Mandi.**—This is a mountainous State in the upper reaches of the Beas. It has a history of considerable length, as it once formed part of the Suket State. Its relations with the British were determined after the battle of Sobraon in 1846. The present minor chief H. H. Raja Jogindra Sen was installed in 1913. The administration is carried on by Mr. H. W. Emerson, I.C.S., the Superintendent, and Mahta Gauda Mal, Assistant Superintendent. The principal crops are rice, maize, wheat and millet. About three-fifths of the State are occupied by forest and grazing lands. It is rich in minerals. The capital is Mandi, founded in 1527, which contains several temples and other buildings of interest and is one of the chief marts for commerce with Ladakh and Yarkhand.

**Nabha.**—Nabha is one of the Phulkian States. It consists of two distinct parts, the main portion comprising 12 separate pieces of territory scattered among the other two Phulkian States of Patiala and Jind. The second portion forms the *nizamat* of Bawal in the extreme south-east of the Punjab. It became a separate State in 1763. After the victory of Sobraon, the chief was deposed and about a quarter of his territory was confiscated. For his loyalty during the Mutiny the chief was rewarded with territory which forms the present Bawal Nizamat. The present chief is H. H. Maharaja Ripudaman Singh Malwadar Bahadur, who was born in 1883 and succeeded in 1911. He is assisted in the administration by a council of three members which also acts as a court of appeal. The

State supports one battalion of Imperial Service Infantry. The State is traversed by the main line and by three branches of the North-Western Railway. The Rajputana Malwa Railway crosses Bawal. The chief crops are gram, wheat and pulses, the chief industries are manufactures of silver and gold ornaments and brass utensils.

**Patiala.**—This is the largest of the Phulkian States, but its territory is scattered and interspersed by small estates and even single villages belonging to other villages and British districts. It also comprises a portion of the Simla hills and territory on the border of Jaipur and Alwar States. Area 5,951 square miles. Population 1,407,659. Its history as a separate State begins in 1762. During the Sikh War and the Mutiny, the Maharaja was loyal and was substantially rewarded. The present Chief H. H. Lieut-Colonel Maharajadhiraja Sri Sir Bhupindar Singh Mahindar Bahadur, G.C.I.E., was born 1891 and succeeded in 1900. During his minority his administrative functions were exercised by a council of regency consisting of three members. The principal crops are gram, barely and wheat. Cotton and tobacco are also grown in parts of the State. A great part of the State is irrigated by the Sirhind and Western Jumna Canal distributaries. It possesses valuable forests. The State is rich in antiquities especially at Pinjaur, Sunam and Sirhind. The North-Western Railway, the E. I. Railway, and a branch of the B. B. & C. I. Railway traverse the State. It contains an Imperial Service contingent, of a regiment of cavalry and two battalions of infantry.

In 1900 it was decided by the Government of India to appoint a Political Agent for Patiala, and the other two Phulkian States of Jind and Nabha were included in the Agency, to which was afterwards added the Mahomedan State of Bahawalpur. The headquarters of the Agency are at Patiala. Gross income, 90 lakhs.

**Sirmur (Nahan).**—This is a hilly State in the Himalayas under the Political control of the Commissioner of Ambala Division. Its history is said to date from the 11th century. In the eighteenth century the State was able to repulse the Gurkha invasion, but in 1793 the Gurkhas were invited to aid in the suppression of an internal revolt in the State and they in turn had to be evicted by the British. In 1857 the Raja rendered valuable services to the British, and during the second Afghan War he sent a contingent to the North-West Frontier. The present chief is H. H. Raja Amar Parkash Bahadur, K.C.S.I., who was born in 1888 and succeeded in 1911. The main agricultural feature of the State is the recent development of the Kiarda Dun, a fertile level plain which produces wheat, gram, rice, maize and other crops. The State forests are valuable and there is an iron foundry at Nahan which was started in 1867 but, being unable to compete with the imported iron, is now used for the manufacture of sugar-cane crushing mills. The State supports an Imperial Service Corps of Sappers and Miners which served in the Tirah Expedition of 1897 and is at present on active service in the European War. It lost heavily in Mesopotamia.

## UNDER THE GOVERNMENT OF BURMA.

Under this Government there are four Shan States, two in the Mandalay Division (Hkamti Long and Mong Mit); and two in the Sagaing Division (Hsawnghsup and Singkaling Hkamti), the area of which is 7,374 square miles and the population about 67,051, consisting chiefly of Buddhists. There are in addition 48 petty States, 5 in the Northern Shan States, 43 in the Southern Shan States, with an area of 58,835 square miles and a population of 1,358,498 consisting of Buddhists and Animists.

**The Shan States**—though a portion of British India, do not form part of Burma proper and are not comprised in the regularly administered area of the Province. They lie for the most part to the east of Upper Burma. They owed allegiance to the Burmese Government, but were administered by their own rulers (Sawbwas) and the British Government has continued to a certain extent the semi-independence which it found existing in 1885. As at present defined, the Shan States are divided into—

1. States under the supervision of the Superintendent, Northern Shan States, whose headquarters are at Lashio; area 14,294 square miles and population 58,952.
2. States under the supervision of the Superintendent and Political Officer, Southern Shan States, whose head quarters are at Taunggyi; area 40,434 square miles and population 900,202;

There are five States in the Northern and 38 in the Southern Shan States. There are in addition two Shan States under the supervision of the Commissioner of the Mandalay Division, namely, Hkamti Long in the unadministered territory to the north of the Myitkyina District and Mong Mit lying north-east of the Ruby Mines District. In the north-west of the Upper Chindwin District towards Manipur there are two small Shan States, Hsawnghsup and Singkaling Hkamti, whose administration is supervised by the Commissioner of the Sagaing Division.

The Northern Shan States are North Hsenwi in the north, South Hsenwi near the Salween in the east, Manglon in the south-east, Hsipaw in the south-west, and Tawngpeng in the north-west. The Wa States east of the Salween

can hardly be said to be under British control. In ordinary matters the States are administered by their Sawbwas, who are assisted by amats, or ministers, in various departments. The Superintendent exercises general control over the jurisdiction of justice and is vested with wide revisionary powers. In revenue matters the Sawbwas administer their States in accordance with local customs which have been but little modified. Of prime importance in the economy of the country is the Mandalay Lashio railway, 180 miles in length, of which 126 miles lie within the Northern Shan States. The line is a single track, and was constructed in the face of considerable engineering difficulties, of which not the least notable was the Golteik gorge, now spanned by a viaduct. It had been proposed to continue the railway about 90 miles farther east to the Kunlong, where is a ferry over the Salween, and eventually to penetrate into Yunnan; but this extension is for the present in abeyance.

The most important of the Southern Shan States are Kengtung and Yawngwe. Under the supervision of the Superintendent and Political Officer and his Assistants, the chiefs—known as Sawbwas, Myozas, and Ngwegunhmus—control their own States, exercising revenue, civil and criminal jurisdiction therein. There are in all 9 Sawbwas, 18 Myozas and 11 Ngwegunhmus.

**Karenni.**—This district consists of five States, with a total area of approximately 4,200 square miles and a population of about 64,000, lying on the frontier south of the Shan States. The largest State is Kantarawadi with an area of 3,000 square miles, a population of nearly 40,000, and a gross revenue of about 1½ lakhs of rupees. More than half of the inhabitants belong to the Red Karens, a people low in the scale of civilisation. An Assistant Political Officer is posted at Loikaw as Agent of the British Government, and a certain amount of control is exercised through him over the chiefs. The principal wealth of the country is teak timber, and the considerable alien population is largely supported by the timber trade, which, however, has declined greatly in the last few years. The Karens themselves are distinguished as hunters.

## UNDER THE GOVERNMENT OF ASSAM.

The only State of importance under the Chief Commissioner of Assam is **Manipur**, which has an area of 8,456 square miles and a population of 346,222, of which about 60 per cent. are Hindus, and 36 per cent. animistic forest tribes. Manipur consists of a great tract of hilly country and a valley, about 30 miles long 20 miles wide, which is shut in on every side. The State adopted Hinduism in the early eighteenth century, when it came under a Naga Raja who subsequently made several invasions into Burma. On the Burmese retreating, Manipur negotiated a treaty of alliance with the British, in 1762. The Burmese again invaded Manipur during the first Burmese War and on the conclusion of peace, in 1826, Manipur was declared independent. The

chief event in its subsequent history was the intervention of the British in 1891 to establish the claim of Kula Chandra Singh as Maharaja, followed by the treacherous murder of the Chief Commissioner, Mr. Quinton and the officers with him and the withdrawal of the escort which accompanied him. From 1891 to 1908 the State was administered by a Political Agent and Superintendent of the State during the minority of H. H. Raja Chura Chand Singh. The Raja was invested with ruling powers in 1908. The administration of the State is now conducted by the Durbar, consisting of the Raja as President, a vice-president, a member of the Indian Civil Service whose services are lent to the State, three ordinary and three additional members who are all Manipuris.

The staple crop of the country is rice. Forests of great variety cover the whole of the hill ranges.

**Khasi and Jaintia Hills.**—These petty chiefships, 25 in number, with a total area of about 3,900 square miles and a population of 126,000, are included under the Government of Assam. Most of the States have treaties or engagements with the British Government. The largest of them is Khyrim, the smallest is Nonglewai, which has a population of 169. Most of them are ruled by a chief or Slem. The Slemship usually remains in one family, but the succession was originally controlled

by a small electoral body constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a Khasi State has always been of a very democratic character, a Slem exercising but little control over his people. Among many of the north-east frontier tribes there is little security of life and property, and the people are compelled to live in large villages on sites selected for their defensive capabilities. The Khasis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small.

### UNDER THE GOVERNMENT OF THE CENTRAL PROVINCES.

The Central Provinces include fifteen feudatory States subordinate to the administration, with an area of 31,174 square miles and a population of 2,117,002. One of the States, Makrai, lies within Hoshangabad District; the remainder are situated in the Chhattisgarh Division, to the different Districts of which they were formerly attached. Their relations with Government are controlled by a Political Agent. The States vary greatly in size and importance. Sakti the smallest, having an area of 138 square miles and Bastar the largest an area of 13,062 square miles. They are administered by hereditary chiefs, who hold on conditions of loyalty and good government set forth in patents and acknowledgments of fealty, but are nominally free from direct interference save in the case of sentences of death, which require the Chief Commissioner's confirmation. But, as a fact, the Government has exercised a very large amount of control, owing mainly to the frequency with which the States have been taken under direct management, because of either the minority or the misconduct of the chief.

The States pay a tribute to Government, which amounts in the aggregate to about 2½ lakhs.

Statistics relating to the chief States are contained in the following table:—

State.	Area.	Population 1911.	Revenue (approximate) in Lakhs.
	Sq. Miles.		Rs.
Bastar ..	13,062	433,310	3
Jashpur ..	1,963	174,458	1
Kanker ..	1,429	127,014	2
Khairagarh ..	931	155,471	3
Nandgaon ..	871	167,362	4
Raigarh ..	1,486	218,860	2
Surguja ..	6,055	248,703	2
Eight other States.	5,377	411,824	6
Total ..	31,174	2,117,002	23

**Bastar.**—This State, which lies to the south-east corner of the Provinces, is the most important of the group. It has an area of 13,062 square miles and a population of 433,310. The family of the Raja is very ancient, and is stated to belong to the Rajputs of the Lunar race. Up to the time of the Marathas, Bastar occupied an almost independent position, but

a tribute was imposed on it by the Nagpur government in the eighteenth century. At this period the constant feuds between Bastar and the neighbouring State of Jeypore in Madras kept the country for many years in a state of anarchy. The chief object of contention was the Kotapad tract, which had originally belonged to Bastar, but had been ceded in return for assistance given by Jeypore to one of the Bastar chiefs during some family dissensions. The Central Provinces Administration finally made this over to Jeypore in 1863, on condition of payment of tribute of Rs 3,000, two-thirds of which sum was remitted from the amount payable by Bastar. By virtue of this arrangement the tribute of Bastar was, until recently, reduced to a nominal amount. The cultivation of the State is extremely sparse. Rice is the most important crop. The State is ruled by the feudatory Chief. The Dewan of the State is an extra Assistant Conservator of Forests who has three assistants under him. After a recent period of disturbance the State has returned to complete tranquillity and precautions are being taken to remove all causes of unrest by better supervision over the minor State officials and a very considerate forest policy. The chief town is Jagdalpur on the Indravati River.

**Surguja.**—Until 1905 this was included in Chota Nagpur State of Bengal. The most important feature is the Manipat, a magnificent tableland forming the southern barrier of the State. The early history of Surguja is obscure; but according to a local tradition in Palamau, the present ruling family is said to be descended from a Raksel Raja of Palamau. In 1758 a Maratha army overran the State, and compelled its chief to acknowledge himself a tributary of the Bhonsla Raja. At the end of the eighteenth century, in consequence of the chief having aided a rebellion in Palamau against the British, an expedition entered Surguja; and, though order was temporarily restored, disputes again broke out between the chief and his relations, necessitating British interference. Until 1818 the State continued to be the scene of constant lawlessness; but in that year it was ceded to the British Government under the provisional agreement concluded with Mudhoji Bhonsla of Berar, and order was soon established. The principal crops are rice and other cereals. The population is mainly aboriginal, the wild Korwa tribe being a perpetual source of trouble. A band of them committed several murders and robberies in 1910.

**KASHMIR.**

Kashmir (known to Indians as Jammu) lies to the east of the Indus and to the west of the Ravi. It is a mountainous country with just a strip of level land along the Punjab frontier, and intersected by valleys of which many are of surpassing beauty and grandeur. It may be divided physically into two areas: the north-eastern comprising the area drained by the Indus with its tributaries, and the south-western, including the country drained by the Jhelum, the Kishanganga and the Chenab. The dividing line between those two areas is the great central mountain range. The area of the State is 84,432 square miles, and the population 3,158,126.

**HISTORY.**—Various poets have left more or less trustworthy records of the history of the valley down to 1586, when it was conquered by Akbar. Srinagar, the capital, had by then been long established, though many of the fine buildings erected by early Hindu rulers had been destroyed by the Mahomedan kings who first appeared in the 12th century. In the reign of Sikandar the population became almost entirely Mahomedan. Akbar visited the valley three times. Jehangir did much to beautify it; but after Aurangzebe there was a period of disorder and decay, and by the middle of the eighteenth century the *Subah* of Kashmir was practically independent of Delhi. Thereafter it experienced the oppression of Afghan rule until it was rescued, in 1819, by an army sent by Ranjit Singh. Sikh rule was less oppressive than that of the Afghans. The history of the State as at present constituted is practically that of one man, a Dogra Rajput, Gulab Singh of Jammu. For his services to the Sikhs this remarkable man had been made Raja of Jammu in 1820, and he added largely to his territory by conquest. He held aloof from the war between the British and the Sikhs, only appearing as mediator after the battle of Sobraon (1846) when the British made over to him for Rs. 75 lakhs the present territories of the State. He had to fight for the valley and subsequently lost part of his State, Gilgit, over which the successors had at a heavy cost to reassert their claims. His son Ranbir Singh, a model Hindu, ruled from 1857 to 1885, when he was succeeded by his eldest son Major-General H. H. Maharaja Sir Partab Singh, G.C.S.I., G.C.I.E.

**ADMINISTRATION.**—For some years the Maharaja took no part in the administration of the State, but since 1905 he has exercised full powers, assisted by a Chief Minister—Rai Saheb Diwan Amar Nath, C.I.E.—a Home Minister, and a Revenue Minister. The four chief executive officers are the Governors of Jammu and of Kashmir, the Wazir Wazarat of Gilgit and the Wazir Wazarat of Ladakh. The real administrative power lies with the petty subordinate officers (talshildars) who exercise revenue, civil, and criminal jurisdiction with regular stages of appeal: but distance and the absence of easy communications are practical checks on the use or abuse of appeals. The British Resident has his headquarters at Srinagar; there is also a Political Agent at Gilgit responsible to the Government of India for the administration of the outlying petty States; and a British Officer is stationed at Leb to assist in the supervision of Central Asian trade. In the Dogras the State has splendid materials for an Army, which con-

sists of 6,961 troops, of whom 3,370 are maintained as Imperial Service troops.

**FINANCE.**—The financial position of the State is strong, and it has more than 46 lakhs invested in Government of India securities. The total revenue last year was 93 lakhs, the chief items being land revenue, forests, customs and opium.

**PRODUCTION AND INDUSTRY.**—The population is pre-eminently agricultural and pastoral. The system of land tenure has been described as "ryotwari in ruins," great complexity existing owing to the fact that there is no local law of rent and revenue. The principal food crop is rice, maize, cotton, saffron, tobacco, hops (autumn crops) and wheat, barley, poppy, beans (spring crops) are also grown. Sheep are largely kept. The State forests are extensive and valuable. Exploration for minerals has not been attempted on sound principles. Vast fields of friable, dusty coal have been found. Gold has been found at Gulmarg and Sapphires in Pader. The industries of manufacture are chiefly connected with sericulture (the silk flature at Srinagar, the largest in the world, was destroyed by fire in July 1912), oil-pressing and the manufacture of wine. The woollen cloth, shawls, and wood carving of the State are famous.

**COMMUNICATIONS.**—The State contains only 16 miles of railway on the Tawi-Suchetgarh branch of the N.-W. Railway. The Jhelum is the only navigable river. At present there is much activity in improving road communications, but in many parts of the country wheeled traffic is unknown.

**PUBLIC WORKS.**—In 1904, a flood spill channel above Srinagar was constructed with a view to minimising the constant risk of floods; and it was hoped that the danger would be still further reduced by the carrying out of a scheme for lowering a part of the bed of the Jhelum, which has since been taken in hand. Good progress has been made with irrigation; but the most important schemes of recent years have been those for an electrical power station on the Jhelum River, and for a Railway into Kashmir. It was proposed to supply from this power station electrical energy for various State schemes (including the Jhelum dredging scheme) and for private enterprise and possibly for working the proposed Kashmir Railway. The works were completed about 1907, and the scheme according to the latest reports is working very satisfactorily. The proposal for a railway to Kashmir had been under discussion for many years, the nature of the country making the question of route a difficult one. In 1905, a decision was taken in favour of a line from Srinagar via the Jhelum Valley and Abbottabad, but the project has remained in abeyance pending the consideration of further schemes, among which are proposals for lines of ropeway from Jammu to Srinagar and from Srinagar to the western borders via the Jhelum Valley.

**EDUCATION.**—In educational matters Kashmir is the most backward tract in the whole of India. In the State as a whole only 2 in every 100 persons can read and write. The number of educational institutions has increased from 45 in 1891 to 379 in 1911.

**Residents.**—The Hon. Mr. S. M. Faser, C.S.I., C.I.E., *Political Agent*, at Gilgit—Major A. D. Macpherson,





## Foreign Possessions in India.

Portugal and France both hold small territorial possessions in the Indian Peninsula.

The Portuguese possessions in India consist of the province of Goa, situated within the limits of the Bombay Presidency, on the Arabian Sea coast; the small territory of Daman on the Gujarat coast, at the entrance to the Gulf of Cambay; and the little island of Diu, lying off the southern extremity of the Kathiawar Peninsula.

### GOA.

Goa forms a compact block of territory surrounded by British districts. Savantwadi State lies to the north of it, the Arabian Sea on the west and North Kanara on the south, and the eastern boundary is the range of the Western Ghats, which separates it from the British districts of Belgaum and North Kanara. The extreme length from north to south is 62 miles and the greatest breadth from east to west 40 miles. The territory has a total area of 1,301 square miles and comprises the island of Goa, acquired by the Portuguese in 1510; the division of Velhas Conquistas, or old Conquests, comprising the neighbouring districts of Bardez and Salsette, acquired in 1543; and the Novas Conquistas, or New Conquests, comprising the districts of Pernem, Bicholim or Batagram, Satari, Ponda or Antruz, Zambaulim or Panchmal, and Canacona or Advota, acquired in the latter half of the 18th century. The small island of Anjediva situated opposite the port of Karwar, in the British district of North Kanara, forms administratively a portion of the province of Goa. This was acquired in 1505. The whole country is hilly, especially the eastern portion, the predominating physical feature being the Eastern Ghats, which besides bounding the country along the north-east and south-east, jut off westward and spread across the country in a succession of spurs and ridges. There are several conspicuous isolated peaks, of which the highest, Sonsagar, is 3,827 feet high.

The country is intersected by numerous rivers running westward from the Ghats, and the principal eight, which are all navigable, are in size of some importance. Goa possesses a fine harbour, formed by the promontories of Bardez and Salsette. Half-way between these extremities lies the *cabo*, or cape, which forms the extremity of the island of Goa. This divides the whole bay into two anchorages, known as Aguada and Marmagao. Both are capable of accommodating the largest shipping from September to May, but Aguada is virtually closed during the south-west monsoon, owing to the high winds and sea and to the formation of sand bars across the estuary of the Mandovi river, which opens into Aguada. Marmagao is accessible at all times and is therefore the harbour of commercial importance. It is the terminus of the railway running to the coast from the inland British system of lines, a breakwater and port have been built there and the trade is considerable, being chiefly transit trade from British territory.

### The People.

The total population in the whole Goa territory was 486,752 at the census of 1910. This

gives a density of 343 persons to the square mile and the population showed an increase of 6 per cent. since the census ten years previously. In the Velhas Conquistas 91 per cent. of the population is Christian. In the Novas Conquistas Christians and Hindus are almost equally numerous. The Moslems in the territory are numbered in a few thousands. The Christians still very largely adhere to caste distinctions, claiming to be Brahmans, Charados and low castes, which do not intermarry. The Hindus are largely Maratha and do not differ from those of the adjacent Konkan districts of Bombay. All classes of the people, with the exception of Europeans, use the Konkani dialect of Marathi, with some admixture of Portuguese words. The official language is Portuguese, which is commonly spoken in the capital and the principal towns, as well as by all educated people. Nearly all the Christians profess the Roman Catholic religion and are spiritually subject to an archbishop, who has the titles of Primate of the East and Patriarch of the East Indies and exercises ecclesiastical jurisdiction also over a great portion of British India. (The Christians of Daman and Diu are subject to a Bishop who bears the titles of Bishop of Daman and Archbishop of Cranganore.) There are numerous churches in Goa, mostly built by the Jesuits and Franciscans prior to the extinction of the religious orders in Portuguese territory. The churches are in charge of secular priests. Hindus and Mahomedans now enjoy perfect freedom in religious matters and have their own places of worship. In the early days of Portuguese rule the worship of Hindu gods in public and the observance of Hindu usages were strictly forbidden and rigorously suppressed.

### The Country.

One-third of the entire territory of Goa is stated to be under cultivation. A regular land survey was only recently made. The fertility of the soil varies considerably according to quality, situation and water-supply. The Velhas Conquistas are as a rule better cultivated than the Novas Conquistas. In both these divisions a holding of fifteen or sixteen acres would be considered a good sized farm, and the majority of holdings are of smaller extent. The staple produce of the country is rice, of which there are two good harvests, but the quantity produced is barely sufficient to meet the needs of the population for two-thirds of the year. Next to rice, the culture of cocoanut palms is deemed most important, from the variety of uses to which the products are applied. Hilly places and inferior soils are set apart for the cultivation of cereals and several kinds of fruits and vegetables are cultivated to an important extent. The condition of the agricultural classes in the Velhas Conquistas has improved during recent years, owing to the general rise in the prices of all classes of agricultural produce and partly to the current of emigration to British territory. Stately forests are found in the Novas Conquistas. They cover an area of 116 square miles and are under conservation and yield some profit to the administration. Iron is

found in parts of the territory, but has not been seriously worked. Manganese also exists and was worked to an important extent a few years ago.

#### Commerce.

In the days of its glory, Goa was the chief entrepot of commerce between East and West and was specially famous for its trade in horses with the Persian Gulf. It lost its commercial importance with the downfall of the Portuguese empire and its trade is now insignificant. Few manufacturing industries of any moment exist, and most manufactured articles in use are imported. Exports chiefly consist of coconuts, betel nuts, mangoes and other fruits and raw produce. A line of railway connects Marmagao with the Madras and Southern Mahratta Railway. Its length from Marmagao to Castle Rock, above the Ghats, where it joins the British system, is 51 miles, of which 49 are in Portuguese territory. The railway is under the management of the Madras and Southern Mahratta Railway administration, and the bulk of the trade of Marmagao port is what it brings down from and takes to the interior. The telegraphs in Goa territory are worked as part of the system of British India, and are maintained jointly by the British and Portuguese Governments. The Goa territory was formerly subject to devastating famines and the people now suffer heavy losses in times of drought. They are then supplied, though at great cost, with rice from British territory.

#### The Capital.

Nova Goa, the present capital of Portuguese India, comprehends Panjim and Ribandar, as well as the old city of Goa, and is six miles in extent. Old Goa is some five miles distant from the new city. Panjim occupies a narrow strip of land leading up to the Cabo, the cape dividing the Aguada bay from that of Marmagao, and mainly slopes down to the edge of the Aguada. It was selected as the residence of the Portuguese Viceroy in 1759, and in 1843 it was raised to its present rank as the capital of Portuguese India. The appearance of the city, with its row of public buildings and elegant private residences, as seen from the water, is very picturesque and this impression is not belied by a closer inspection of its neat and spacious roads, bordered by decent, tidy houses. The most imposing public structures are the barracks, an immense quadrangular building the eastern wing of which accommodates the Lyceum, the Public Library and the Government Press. Other noticeable buildings are the Cathedral and various churches, the viceregal palace, the High Court and so on. The square in the lower part of the town is adorned with a life-sized statue of Albuquerque standing under a canopy.

#### History.

Goa was captured for the Portuguese by Alfonso de Albuquerque in 1510. Albuquerque promptly fortified the place and established Portuguese rule on a firm basis. From this time Goa rapidly rose in importance and became the metropolis of Portuguese power in the East. There was constant fighting with the armies of the Bijapur kingdom, but the Portuguese held their own and gained the surrounding territory now known as the Velhas Conquistas.

The subsequent history of the town is one of ostentation and decay. Goa reached its summit of prosperity at the end of the sixteenth century. The accounts of travellers show that the Goa of those days presented a scene of military, ecclesiastical and commercial magnificence which has had no parallel in the British capitals of India. But the Portuguese based their dominion in India on conquest by the sword and they laboured to consolidate it by a proselytizing organisation which throws the missionary efforts of every other European power in India into the shade. Old Goa, as the ruins of the old capital are called to-day, had a hundred churches, many of them of magnificent proportions, and the Inquisition was a power in the land. The result showed how rotten was this basis and how feebly cemented the superstructure reared upon it.

#### Modern Times.

There was frequently recurring fighting and in 1741 the Marathas invaded the neighbourhood of Goa and threatened the city itself. An army of 12,000 men arrived from Portugal at the critical moment. The invaders were beaten off, and the Novas Conquistas were added to the Portuguese possessions. In 1844 the shelter given by Goa to fugitives from justice in British territory threatened to bring about a rupture with the British Government at Bombay. In 1852 the Ranes of Satari, in the Novas Conquistas revolted. In 1871 the native army in Goa mutinied and the king's own brother came from Lisbon to deal with the trouble and having done so disbanded the native army, which has never been reconstituted. But another outbreak among the troops took place in 1895 and the Ranes joining them the trouble was again not quieted until the arrival of another special expedition from Lisbon. The Ranes again broke out in 1901 and again in 1912, troops being again imported to deal with the last outbreak, which was only reported concluded in the summer of 1913.

#### Administration.

Goa is regarded as an integral portion of the Portuguese Empire and, with Daman and Diu, forms for administrative purposes one province subject to a Governor-General, who is appointed directly by the Lisbon Government and holds office for five years. Besides his civil functions, he is invested with supreme military authority in the province.

The Governor-General is aided in his administration by a Council composed of a Chief Secretary, the Judges of the High Court, the two highest military officers in Goa, the Attorney-General, the Inspector da Fazenda, the Health Officer and the President of the Municipal Chamber or Corporation of the capital (Camara Municipal das Ilhas), which is the oldest Municipal body in the East. As a rule, all the members give their opinions and vote in every matter on which they are consulted by the Governor-General. There are five other Juntas, or councils, called the Junta Geral da Provincia (general council of the province), the Conselho da Provincia (the council of the province), the Conselho Technico das Obras publicas, the Conselho

Inspector de Instrucao publica, and the Conselho de Agricultura. The first of these is composed of the Chief Secretary, the Arch bishop or his substitute, the Attorney-General the Inspector da Fazenda, Inspector of Public Works, the Health Officer a Professor of the Medico-Surgical College, a Professor of the

Lyceum, or educational College, a Professor of the Normal School and a representative from each of the Municipal Corporations of the province.

In addition to this machinery of administration there are subordinate agencies for the local government of every district.

### DAMAN.

The settlement of Damam lies at the entrance to the Gulf of Cambay, about 100 miles north of Bombay. It is composed of two portions, namely, Damam proper, lying on the coast, and the detached pargana of Nagar Aveli, separated from it by a narrow strip of British territory and bisected by the B. B. & C. I. Railway. Damam proper contains an area of 22 square miles and 26 villages and has a population (1910) of 18,300. Nagar Aveli has an area of 60 square miles and a population (1910) of 29,020. The town of Damam was sacked by the Portuguese in 1531, rebuilt by the natives and retaken by the Portuguese in 1558, when they made it one of their permanent establishments in India. They converted the mosque into a church and have since built eight other places of worship. Of the total population the number of Christians is 1,586. The number of houses is 8,971, according to the same census. The native Christians adopt the European costume, some of the women dressing themselves after the present European fashion, and others following the old style of petticoat and mantle once prevalent in Spain and Portugal.

The soil of the settlement is moist and fertile, especially in the pargana of Nagar Aveli,

but despite the ease of cultivation only one-twentieth part of the territory is under tillage. The principal crops are rice, wheat, the inferior cereals of Gujarat and tobacco. The settlement contains no minerals. There are stately forests in Nagar Aveli, and about two-thirds of them consist of teak, but the forests are not conserved and the extent of land covered by each kind of timber has not been determined. Before the decline of Portuguese power in the East, Damam carried on an extensive commerce, especially with the east coast of Africa. In those days it was noted for its dyeing and weaving.

The territory forms for administrative purposes a single district and has a Municipal Chamber and Corporation. It is ruled by a Governor invested with both civil and military functions, subordinate to the Governor-General of Goa. The judicial department is administered by a judge, with an establishment composed of a delegate of the Attorney-General and two clerks. In Nagar Aveli the greater part of the soil is the property of the Government, from whom the cultivators hold their tenures direct. A tax is levied on all lands, whether alienated or the property of the State. The chief sources of revenue are land-tax, forests, excise and customs duties.

### DIU.

Diu is an island lying off the southern extremity of the Kathiawar Peninsula, from which it is separated by a narrow channel through a considerable swamp. It has a small but excellent harbour, where vessels can safely ride at anchor in two fathoms of water and owing to the great advantages which its position offers for trade with Arabia and the Persian Gulf, the Portuguese were fired at an early period with a desire to obtain possession of it. This they gained, first by treaty with the Sultan of Gujarat and then by force of

arms. Diu became opulent and famous for its commerce. It has now dwindled into insignificance. The extreme length of the island is about seven miles and its breadth, from north to south, two miles. The area is 20 square miles. The population of the town of Diu, from which the island takes its name, is said to have been 50,000 in the days of its commercial prosperity. The total population of the island, according to the census of 1910, is 14,170, of whom 271 were Christians.

### FRENCH POSSESSIONS.

The French possessions in India comprise five Settlements, with certain dependent lodges, or plots. They aggregate 203 square miles, and had a total population in 1912 of 282,386. The first French expedition into Indian waters, with a view to open up commercial relations, was attempted in 1603. It was undertaken by private merchants at Rouen, but it failed, as also did several similar attempts which followed. In 1642 Cardinal Richelieu founded the first Campagne d'Orient, but its efforts met with no success. Colbert reconstituted the Company on a larger basis in 1664, granting

exemption from taxes and a monopoly of the Indian trade for fifty years. After having twice attempted, without success, to establish itself in Madagascar, Colbert's Company again took up the idea of direct trade with India and its President, Caron, founded in 1668 the Comptoir, or agency, at Surat. But on finding that city unsuited for a head establishment he seized the harbour of Trincomalee in Ceylon from the Dutch. The Dutch, however, speedily retook Trincomalee; and Caron, passing over to the Comorand coast, in 1672 seized St. Thome, a Portuguese town adjoining Madras,

which had for twelve years been in the possession of Holland. He was, however, compelled to restore it to the Dutch in 1674.

The ruin of the Company seemed impending when one of its agents, the celebrated François Martin, suddenly restored it. Rallying under him a handful of sixty Frenchmen, saved out of the wreck of the settlements at Trincomalee and St. Thome, he took up his abode at Pondicherry, then a small village, which he purchased in 1683 from the Raja of Gingee. He built fortifications, and a trade began to spring up; but he was unable to hold the town against the Dutch, who wrested it from him in 1693, and held it until it was restored to the French by the Peace of Ryswick in 1697. Pondicherry became in this year, and has ever since remained, the most important of the French Settlements in India. Its foundation was contemporaneous with that of Calcutta. Like Calcutta, its site was purchased by a European Company from a native prince, and what Job Charnock was to Calcutta François Martin proved to Pondicherry. On its restitution to the French by the Peace of Ryswick in 1697, Martin was appointed Governor, and under his able management Pondicherry became an entrepôt of trade.

Chandernagar, in Lower Bengal, had been acquired by the French Company in 1688, by grant from the Delhi Emperor; Mahe, on the Malabar Coast, was obtained in 1725-6, under the government of M. Lenoir; Karikal, on the Coromandel Coast, under that of M. Duma, in 1739. Yanam, on the coast of the Northern Circars, was taken possession of in 1750, and formally ceded to the French two years later.

#### Administration.

The military command and administration-in-chief of the French possessions in India are vested in a Governor, whose residence is at Pondicherry. The office is at present held by Monsieur A. Martineau. He is assisted by a Secrétaire General and by several "Chefs de Service" in the different administrative departments, and by a Chief Judicial Officer. In 1879 local councils and a council-general were established, the members being chosen by a sort of universal suffrage within the French territories. Seventeen Municipalities, or Communal Boards, were erected in 1907, namely Pondicherry, Ariancoupam, Modillarpeth, Oulgaret, Villenour, Eliroubouvane, Bahour and Nettapacam, for the establishment of Pondicherry; Karikal, Neravy, Nedoucadou, Tirunalar, Grande Aldee, Cotchery, for the establishment of Karikal, and also Chandernagar, Mahe and Yanam. On municipal boards natives are entitled to a proportion of the seats. Civil and criminal courts, courts of first instance and a court of appeal compose the judicial machinery. The army and establishments

connected with the Governor and his staff at Pondicherry, and those of the local governors or administrators at Chandernagar, Yanam, Mahe and Karikal, together with other headquarters charges, necessarily engross a large proportion of the revenue. All the state and dignity of an independent Government, with four dependent ones, have to be maintained. This is effected by rigid economy, and the prestige of the French Government is worthily maintained in the East. Pondicherry is also the scene of considerable religious pomp and missionary activity. It forms the seat of an Archbishop, with a body of priests for all French India; and of the Missions Etrangères, the successors of the Mission du Carnatic founded by the Jesuits in 1776. But the chief field of this mission lies outside the French Settlements, a large proportion of its Christians are British subjects and many of the churches are in British territory. The British rupee is the only legal tender within French territories. A line of railway running *via* Villenour, from Pondicherry to Villupuram on the South Indian Railway, maintains communication with Madras and the rest of British India, and Karikal is linked to the same railway by the branch from Peralam. A Chamber of Commerce consisting of fourteen members, nine of them Europeans or persons of European descent, was reorganised by a decree of 7th March, 1914. The capital, Pondicherry, is a very handsome town, and presents, especially from the sea, a striking appearance of French civilisation.

#### People and Trade.

The Settlements are represented in Parliament at Paris by one senator and one deputy. These are at the present time Mons. E. Flandin and Mons. P. Bluysen, respectively. There were in 1915, 60 primary schools and 3 colleges, all maintained by the Government, with 351 teachers and 9,096 pupils. Local revenue and expenditure (budget of 1916) Rs. 18,34,722. The principal crops are paddy, groundnut, and ragi. There are at Pondicherry 5 cotton mills, and at Chandernagar 1 jute mill; the cotton mills have, in all, 1,622 looms and 73,092 spindles, employing 12,020 persons. There are also at work one oil factory and a few oil presses for groundnuts, one ice factory, one ironworks and a cocotina factory. The chief exports from Pondicherry are oilseeds. At the ports of Pondicherry, Karikal, and Mahe in 1915 the imports amounted to 61,57,351 francs and the exports to 2,11,55,197 francs. At these three ports in 1915, 263 vessels of 339,131 tons entered and 253 of 396,578 tons cleared. Pondicherry is visited by French steamers sailing monthly between Colombo and Calcutta in connection with the Messageries Maritimes. The figures contained in this paragraph are the latest available up to November 1916, when this chapter was corrected.

#### PONDICHERRY.

Pondicherry is the chief of the French Settlements in India and its capital is the headquarters of their Governor. It is situated on the Coromandel Coast, 105 miles from Madras by road and 122 by the Villupuram-Pondicherry branch of the South Indian Railway.

The area of the Settlement is 115 square miles and its population in 1915 was 206,828. It consists of the four communes of Pondicherry. The Settlement was founded in 1674 under François Martin. In 1693 it was captured by the Dutch but

was restored in 1699. It was besieged four times by the English. The first siege under Admiral Boscawen in 1748 was unsuccessful. The second, under Eyre Cooté in 1761, resulted in the capture of the place, which was restored in 1765. It was again besieged and captured in 1778 by Sir Hector Munro, and the fortifications were demolished in 1779. The place was again restored in 1785 under the Treaty of Versailles of 1783. It was captured a fourth time by Colonel Braithwaite in 1793, and finally restored in 1816.

The Settlement comprises a number of isolated pieces of territory which are cut off from the main part and surrounded by the British District of South Arcot, except where they border on the sea. This fact occasions considerable difficulty in questions connected with crime, land customs and excise. The Collector of South Arcot is empowered to deal with ordinary correspondence with the French authorities on these and kindred matters, and in this capacity is styled the Special Agent. At Pondicherry itself is a British Consular

Agent accredited to the French Government, who is usually an officer of the Indian Army. The town is compact, neat and clean, and is divided by a canal into two parts, the *Ville blanche* and the *Ville noire*. The *Ville blanche* has a European appearance, the streets being laid at right angles to one another, with trees along their margins reminding the visitor of continental boulevards, and the houses being constructed with courtyards and embellished with green venetians. All the cross streets lead down to the shore, where a wide promenade facing the sea is again different from anything of its kind in British India. In the middle is a screw-pile pier, which serves, when ships touch at the port, as a point for the landing of cargo, and on holidays as a general promenade for the population. There is no real harbour at Pondicherry; ships lie at a distance of about a mile from the shore, and communication with them is conducted by the usual *masula* boats of this coast. Facing the shore end of the pier is a statue of the great Dupleix, to whom the place and the French name owed so much.

## CHANDERNAGAR.

Chandernagar is situated on the bank of the Hooghly, a short distance below Chinsura. Population (1915) 27,644. The town was permanently occupied by the French in 1688, though previously it had been temporarily occupied by them at a date given as 1672 or 1676. It did not, however, rise to any importance till the time of Dupleix. It changed hands between British and French various times during the Napoleonic wars and was finally restored to the French in 1816.

The former grandeur of Chandernagar has disappeared, and at present it is little more than a quiet suburban town with little external trade. The railway station on the East Indian

Railway is just outside French territory 22 miles from Calcutta (Howrah). The chief administrative officer is the Administrator, who is subordinate to the Governor of the French Possessions. The peculiar situation of Chandernagar affords unusual facilities for the escape from British territory of thieves and for the operations of smugglers in opium and other excisable articles. Considerable trouble was experienced a few years ago by the escape of political refugees there. The chief public institution is the College Dupleix, formerly called St. Mary's Institution, founded in 1882 and under the direct control of the French Administrator.

## KARIKAL.

Karikal lies on the Coromandel Coast between the Tanjore District of Madras and the Bay of Bengal. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles. It is governed by an Administrator subordinate to the Governor at Pondicherry. The population has in recent years rapidly decreased. In 1883 it was 93,055; in 1891, 70,526; in 1901, 56,595; in 1912, 56,579; and in 1915, 56,867; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only taluk in Tanjore District which has a higher density. Each of the three communes—namely, Karikal, La Grande Aldee, and Nedungadu—possesses a mayor and council. The members are all elected by universal suffrage, but in the municipality of Karikal half the number of seats

are reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery, besides many smaller channels.

The capital of the settlement is situated on the north bank of the river Arasalar, about  $1\frac{1}{2}$  miles from its mouth. It has a brisk trade in rice with Ceylon, and to a less extent with the Straits Settlements. It has no commerce with France, and very little with other French colonies. The port is merely an open roadstead, provided with a light-house 142 feet high, the light in which has a range of from 8 to 10 miles. Indian labourers emigrate from Karikal to the French colonies in large numbers. In 1899 Karikal was connected with Peralam on the Tanjore District Board Railway. Karikal finally came into French possession on the settlement after 1815.

## The Indian Frontiers.

In the earlier editions of The "Indian Year Book," in the articles on the Indian frontiers, it was pointed out that this question was for nearly three generations an issue between Great Britain and Russia. With one or two notable exceptions, British statesmen and British soldiers were able to view this issue solely in terms of Russia; they attempted to meet it by opposing Russia in every part of the world, by building up buffer states between the Indian Empire and Russia in Asia; and by maintaining inviolate the isolation of India on the landward side. A sketch of the frontier difficulties of the Indian Government since the British began to assume territorial power in India is really a reflection of the history of Europe. Our earliest dangers were either internal, or came from the sea. The sea menace was not of long duration. The defeat of the Portuguese and the Dutch left us with only one serious rival, the French, and when the sea power of France had been shattered by the felling of the gallant Suffren, her schemes for dominion broken by the feeble support given to the great Duplex, and her hopes of advantage in India finally dispersed by the overthrow of Hyder Ali, then the foreign menace lapsed for well-nigh half a century. Meantime the process of internal consolidation advanced so rapidly that when renewed pressure came from the North, there was no rival to the British in India, and only one considerable military power, the Sikhs under Ranjit Singh. Such were the conditions when fears of Russian intrigues in Afghanistan, and the belief that the Amir Dost Mahomed was lending a ready ear to them, induced the disastrous attempts to set the exiled Shah Shuja on the throne of Afghanistan, and inaugurated the most deplorable episode in Indian frontier policy, the war of 1838. That was the first stage in the long duel between Great Britain and Russia for influence in Central Asia and on the confines of India. There are no pages in British history which are so unpleasant to turn. Our policy may be summed up in a sentence—impotent opposition to the Russian advance in Central Asia. Russian policy was much more simple. In part her advance sprang from the inevitable clash of a higher civilisation with a lower; in part, no doubt, her officers were not loth to pay off, by setting us in a ferment in Central Asia, scores made on the heights of Balacava and at the Berlin Conference. It was not until war was avoided by a hair's breadth that relations began to improve. The Russo-Afghan affray at Penjdeh in 1885 brought both countries to a realisation of what they were nearly fighting over. After that there was a slow improvement. The Russo-Afghan boundaries were delimited. The frontiers on the Pamirs were settled. There were alarms and excursions during the Russo-Japanese war, when erroneous accounts were circulated of great Russian concentrations in Central Asia, and again, when intrigues with Tibet forced Lord Curzon to send the Younghusband Expedition to Lhasa. But the ground was gradually prepared for the Anglo-Russian Agree-

ment, and since after conclusion of that instrument the Frontier question, as it used to be understood, has faded into the background; until it was revived by German aggression.

### The Land Route.

We have said that the Indian frontier question was a reflection of the general European situation. Whilst the gaze of the British people was concentrated on Russia, which with her huge Asiatic possessions could never have seriously considered the conquest of India, they failed to see the real menace which sprang from the eastern ambitions of Germany. It is one of the ironies of the situation that a British Ambassador at Constantinople, who is generally described as able, actually encouraged the advent of Germany into Asia Minor as a counterpoise to Russia and thus laid the train for the present war. For it is not open to doubt that the ultimatum to Serbia was designed to reduce that State to a condition of servitude to Austria, and thereby to pave the way for an advance to Salonika, the conquest of Constantinople, and an advance through Asia Minor to the Persian Gulf. All these ambitions were centered in the revival of the **Land Route to the East**. We study our history so carelessly that the real history of the land route to the East survives in little more than a shadowy knowledge of the travels of Marco Polo. But for centuries the land route was one of the great highways of the world. When Alexander set out on his career of conquest twenty-two centuries ago, there was an easy high road from Mesopotamia to Seistan and not a very difficult one to Mekran; and so it came about that migratory movements, either compulsory or voluntary, continued through centuries, ever extending their scope until checked by the deserts of the Indian frontier, the highlands of the Pamirs or Tibet, or the cold wastes of Siberia. The **closing of this road** was due to the eruption of the Afghan, the Turk and the Mongol; and in particular to the final downfall of the Empire of the Kaliphs before the destroying hordes of Chengiz Khan and Tamerlane. The land route was closed, and the perfection of sea communications prevented the existence of any strong economic need for its revival. The improvement of the caravan route between Nushki and Sistan, for Meshed, represents the only improved land communication of the British Empire for all these years. The abortive proposal for a railway along the Euphrates Valley meant the killing of the one project which might have prevented the later complications.

### Advent of Germany.

But if the British people failed to understand the teachings of history, and were lulled into the complacent belief that the land route could be indefinitely closed and all traffic with the East confined to the sea, whereon they were masters, the German Government refused to subscribe to this comfortable delusion. The story of the revival of the land route, and with it a whole chain of German ambitions

is little known, and was for long preserved in fragments; it has however been told with authority and clearness in the 29th number of "The Times" History of the War, to which the reader in search of more detailed information is referred. We propose to summarise that story here, although parts of it more properly belong to the detailed frontier sections which follow:—

The first visit of the Emperor William to Constantinople in 1889 saw the dawn of a **Pan-Germanic Scheme** which was known in Berlin as the B.B.B.—Berlin-Byzantium-Baghdad. After the war began, a Professor, lecturing at Berlin, said that Germany's aims might be summed up in four catchwords—North Sea, Constantinople, Baghdad, Indian Ocean. Another favourite expression, attributed to the Emperor, was a Germanic wedge reaching from Hamburg to the Persian Gulf. The steps towards this goal were very deliberately taken. The first measure was to acquire supreme **influence at Constantinople**. This was done by assiduously courting Abdul Hamed, and discreetly maintaining his influence against the rest of Europe. At a time when Abdul Hamed's hands were red with the blood of the Armenians murdered by his orders in his capital and his provinces, the Kaiser professed himself his warm friend, and steadfastly refused to support any measures to save the lives of the Armenians or to check misgovernment in Macedonia. The reward came in valuable concessions. The Deutsche Bank group, which had acquired control of the railways of European Turkey, extended its influence to Asia Minor. After the second visit of the Kaiser to Constantinople in 1898, there came the Baghdad Railway concession (q. v.) by which the Sultan granted a concession for the continuation of the Anatolian railways (a German enterprise) to Baghdad and the Persian Gulf to a German syndicate. This was styled The Imperial Ottoman Baghdad Railway Company, and the concession was signed on behalf of Germany by Herr von Siemens, of the Deutsche Bank. By a further and more definite concession, granted in 1903, to Herr von Gwinner, of the Deutsche Bank, Turkey guaranteed interest on the cost of the line at the rate of £700 per annum per kilometre. This was sufficient to ensure the promoters a handsome profit on the enterprise, regardless of the traffic conditions. There is a good deal of misconception with regard to the line which the Germans are building under this concession. All sorts of estimates have been made on the assumption that the line will be suited only for slow trains, and the conclusion has been drawn that the sea route will be able to compete with it for passenger traffic. The fact is that the later sections of the line are being built to a standard which in India is applied to **express traffic**, and which even in the Indian hot weather permits trains to be run at fifty miles an hour.

#### Persian Gulf Port.

An essential part of this scheme was a port to serve as a terminus for the railway in the Persian Gulf. The steps taken to this end are very characteristic of Teutonic commercial diplomacy. The first German firm to appear

in the Gulf was that of Woonckhaus & Co., of Hamburg, which in 1896 began to deal in shells and mother of pearl at Lingah. The next year the Germans established a vice-consulate at Bushire; there were then six German subjects in the Persian Gulf. In 1899, after the signing of the definitive Baghdad Railway concession, this activity increased. The German cruiser *Arcona* visited various parts of the Gulf. A party of German "scientists" appeared at Bunder Abbas. In 1900 Herr Steinrich, German Consul-General at Constantinople, travelled overland to the Gulf at the head of a mission, which included the German Military Attaché at Constantinople. He visited Sheikh Mubarak of Koweit and tried to buy a site at Ras Kathama, at the head of the Bay, as a terminus for the railway. He was refused, for the Sheikh had entered into an agreement with Great Britain not to lease or dispose of any part of his possessions to a foreign power without our permission. Baffled in direct negotiations, the Germans, who were now all-powerful at Constantinople, stirred up the Turks to attack Sheikh Mubarak. In 1901 a Turkish corvette, packed with troops, sailed into Koweit harbour and the commander announced that he proposed to take possession of the town. A British cruiser intervened and the Turks sailed away. Later a high Turkish official, with a menacing letter to the Sheikh, entered the harbour and retired for the same reason. Two other attempts were made; the first was to stir up Ibn Rashid, of Central Arabia, to attack Koweit, the second to incite Mubarak's nephews to the same end; with the failure of these efforts the direct German attacks on Koweit came to a conclusion. They once again had recourse to the Turks. They seem to have discovered an alternative terminus to the railway in at Khor Abdullah, north of Koweit, and sent troops down to establish posts there, which remained until the eve of the war.

Meantime **commercial penetration** was energetic. The firm of Woonckhaus was exceedingly active and expanded all over the Gulf, run on lines which could not have been commercially profitable. Various attempts were made to acquire a *pled a terre*, and one almost succeeded. The Sheikh of Shargah granted a concession to three Arabs to work the red oxide deposits on the island of Abu Musa and the Arabs transferred it to the Woonckhaus firm. The Sheikh protested and with the assistance of the British the intruders were removed; the German Press protested, but the Government confined themselves to a formal caveat. Another German agent sought to obtain an irrigation concession in the Karun. The Hamburg-America Company entered the Gulf trade with a great flourish of trumpets and a display calculated to impress the Arabs. This was the position when three years before the war a serious attempt was made to **arrive at an agreement** between Great Britain, Germany and Turkey which would regularise the position. It provided that the terminus of the Baghdad Railway was to be at the true commercial terminus, Basra. No extension beyond Basra was to be made without the sanction of Great Britain. Turkey agreed to



abandon her pretention to suzerainty over the Bahrein Islands, Maskat and the territory of the Trucial Chiefs, and to evacuate the Peninsula of El Katr, near Bahrein. Great Britain agreed to recognise the suzerainty of Turkey over Koweit, on the condition that Turkey did not

interfere in the internal affairs of the Sheikh and recognised the British conventions with Mubarak. This agreement, and a complementary agreement with Germany, were understood to be ready for signature when the war broke out.

## THE EXPEDITION TO MESOPOTAMIA.

At this point we may conveniently summarise the progress of the expedition to Baghdad, although a consideration of the position of Basra and Baghdad in the polity of the Gulf properly belongs to a later section. For some time before the actual outbreak of hostilities on October 29th, 1914, the British Government had known that the participation of Turkey in the war on the side of Germany was inevitable; they were determined not to give the Turks any excuse for hostilities, but at the same time they were prepared. A Poona Brigade, under Brigadier-General Delamain, was sent to the Island of Bahrein, to be ready for all emergencies. Consequently when the Turks commenced hostilities it was in a position to act with vigour. The first British troops reached the bar at the mouth of the Shatt-el-Arab on November 27th and took Fao, an old-fashioned Turkish fort and cable station. They then proceeded thirty miles up the river and landed at Sanjeh in order to protect the works of the Anglo-Persian Oil Company, which is working a valuable petroleum concession in the valley of the Karun (q.v.) On November 18th, Lieutenant-General Sir Arthur Barrett, who had been placed in command of the operations, arrived with strong reinforcements, and on November 15th drove the Turks from part of the village of Sahain. On November 17th, the whole force moved north, found Sahain evacuated, got in touch with the Turks at Sahail, near the river, and after a sharp action, in which the Dorseta especially distinguished themselves, drove them out with considerable loss. On the morning of the 24th came the unexpected intelligence that the **Turks had evacuated Basra** and that the Arabs were looting the town; Sir Arthur Barrett pushed forward with all speed by land and river, and on November 23rd the British troops formally entered the city. The notables were assembled, a proclamation stating the reasons for the occupation and the friendliness of the British Government was read, and salutes were fired.

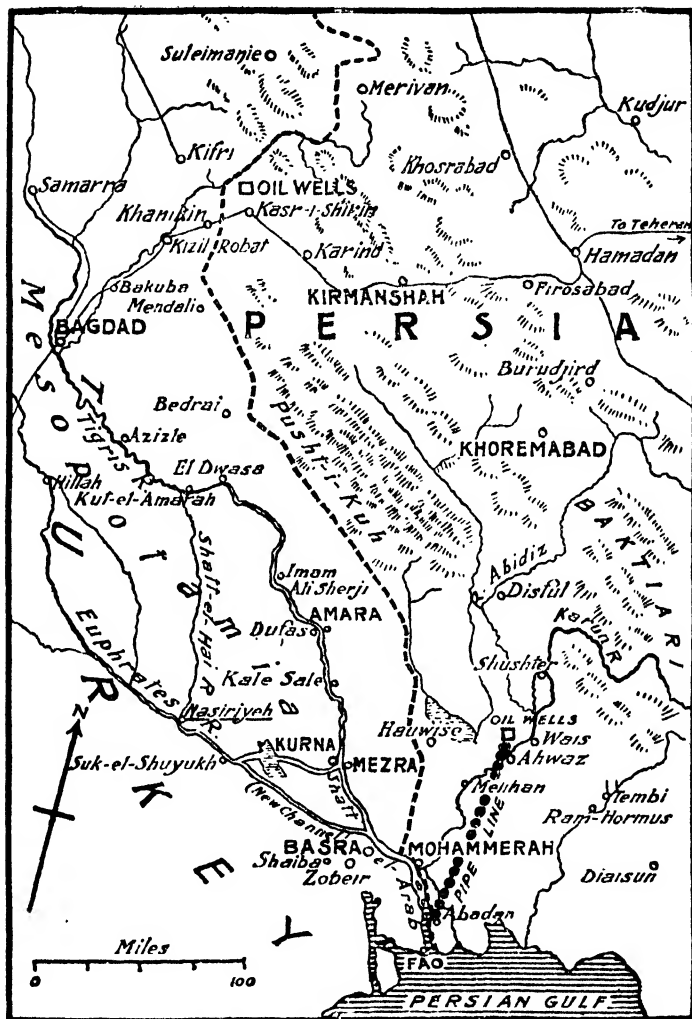
**Importance of Basra.**—The importance of Basra was for long little appreciated by the British people, who had their gaze directed on the possibilities of Koweit as a terminus for the Baghdad railway and to the traditional glories of Baghdad itself. But Basra is bound to become one of the great ports of the world. The main portion of the city lies up the contracted Aashar Creek, a quarter with narrow, unpaved streets, two miles from the river. The population is estimated at 60,000, but there are probably many more people in the outer suburbs. The population is very mixed including many Jews and Armenians. The Turks are few in number and consist mainly of the officials and the garrison. The merit of the city lies in its geographical position. It lies just below the confluence of the Tigris

with the Euphrates and therefore receives the traffic of the two rivers. It is only sixty miles from the sea, and the river channel is so deep that it could easily be made available for steamers of the largest tonnage that can pass through the Suez Canal. The only obstacle to its rapid development is the bar at the mouth of the Shatt-el-Arab, and as this is of the softest mud it could easily be dredged. Basra must of necessity be the port of the Middle East; given decent government in Mesopotamia and the dredging of the bar and it will become a powerful commercial factor in Asia.

**The Garden of Eden.**—After their retirement from Basra the Turks established themselves at Kurna, forty-nine miles northward, where the partially-blocked channel of the Euphrates joins the Tigris; this is often said to be the site of the Garden of Eden. It was determined to expel them. An expedition for this purpose left Basra on December 3rd, and after preliminary successes found the Turks in such force and so strongly entrenched that reinforcements were needed. These arrived on December 6th, the river was boldly crossed above Kurna, and then at midnight on the 8th a small steamer came down the river conveying an offer from the late Governor of Basra, Subhi Bey, to surrender. An unconditional surrender was demanded and received; and at one o'clock p.m. on the 9th the Turks laid down their arms. In January a force of Turks with six guns established themselves on the Ratta Canal, about seven miles north of the Mezera Camp near Kurna, and were shelled out; more serious fighting was to follow.

**Fight for Shaiba.**—The object of the Turks was now to recapture Basra. They had no large force nearer than Baghdad, which lies on the Tigris 500 miles (by river) north-west of Basra. The direct route to Basra down the Tigris was, however, blocked by the British occupation of Kurna. The Turkish forces, therefore, came down that river as far as Kut-al-Amara (220 miles from Baghdad) and thence along the Shatt-al-Hal, the canal which connects the Tigris with the Euphrates, to Nasariyeh on the latter river. From this point about 115 miles north-west of Basra, they marched across the desert, 15,000 strong. At Shaiba, 10 miles west of Basra, they encountered a British force much inferior in numbers. Here on April 12-14 very severe fighting occurred—far more severe than any previously experienced in Mesopotamia. For some hours on the last day the issue hung in the balance, and at one time our retirement seemed inevitable. In the end we were completely successful. The Turks had at least 5,000 casualties; ours were about 1,300.

**Capture of Amara.**—After our capture of Kurna, on December 9, the Turks occupied a



number of low hills to the north, from which they fitfully bombarded the town. It was necessary to evict the enemy from their positions before we could advance north of Kurna. The problem was a formidable one, because the whole country for many miles to the north was under several feet of water, except a few isolated sandbanks and hillocks such as those occupied by the enemy. The country is thus flooded every year on the melting of the snows in the far north round the head-streams of the Tigris. The ground remains under water for six months or more, and the only thing to be done was to attack the enemy's positions in boats. The local boat, called a bellum, has a length of about 35 ft. and a beam of 2½ ft., and is propelled by poles like a punt, or, in deep water, by paddles. The whole of the brigade stationed at Kurna was engaged for a good many weeks in learning to navigate these boats. At the same time numerous field guns were mounted on various other boats and rafts to enable them to approach within range of the Turkish positions. At dawn on May 31 the whole brigade moved out of Kurna for the attack. Several hundred boats were employed, each holding 10 men. Machine and mountain guns were mounted on pairs of boats yoked together. The spectacle of a brigade of infantry thus advancing across flooded country was perhaps unique in the history of the British and Indian Armies. Before the advance the Turkish positions were bombarded from the Tigris by three sloops of the Royal Navy, by the Royal Indian Marine steamer Lawrence, and by the field guns already mentioned. The low hills attacked were occupied by Turks and Kurds, with about half a dozen Germans. Most of the flooded area to be crossed was thickly covered with reeds, through which the progress of our boats was very slow. The enemy had, therefore, a magnificent target. Fortunately they had no machine guns, while their rifle fire was not good. They had six field guns, but their ammunition was inferior and their gunnery poor.

On Norfolk Hill, three miles north of Kurna and the first position to be attacked, the enemy put up a fairly good fight, and the hill was not captured without a good deal of bayonet work, our men leaving their boats and rushing to the Turkish trenches. From all their other positions, six in number, the enemy fled as a result of our bombardment, or where their retreat was cut off surrendered without resistance. They had previously sunk several large barges across the Tigris, a few miles north of Kurna, in order to prevent our steam vessels from cutting off their retreat. But the work was not thoroughly done, and by the evening of June 1, the second day of the operations, our steamers were past the obstruction and in pursuit of the fleeing enemy. On June 3 we occupied Amara 87 miles above Kurna, without opposition. This town has a population of 10,000, and is the most important place on the Tigris between Baghdad (370 miles up stream) and Basra (130 miles down stream).

By the evening we had captured 80 officers and 2,000 men, seven guns, several river steamers, and other craft, and a large amount of ammunition. Eighty corpses were found on Norfolk Hill and a few of the prisoners had

been wounded there. Our own casualties during these four days were one British officer killed and 20 other casualties. The prisoners taken included three German non-commissioned officers. Five other Germans, believed to be officers, escaped into the marshes, but two of them were killed within a few hours by Beduin Arabs.

**Nasriyeh.**—The capture of Amara was of more importance than the expulsion of the Turks from one centre. If the map is studied it will be seen that after their retirement from Basra the Turks had three lines of advance—from Amara they could move against the valley of the Karun or Basra at will; from Kut-al-Amara, further north, they were in a position to come down the Shatt-el-Hai to Nasriyeh and then turn eastwards towards Basra, as they did when they attacked at Shaiba. Now the advance against Amara was accompanied by sweeping operations up the Karun, and it is believed that the Turks who retired from before General Goringe's sweeping columns, finding themselves cut off from their base at Amara, suffered severely from the Marsh Arabs, who systematically murder the wounded and the stragglers at both sides. But from their base at Kut-al-Amara the Turks still had a double line of advance—down the Shatt-el-Hai and down the Tigris. The next operations were designed to force them back along the single line of communications via the Tigris. The first series aimed at the capture of Nasriyeh. The operations under General Goringe which culminated towards the end of July in the brilliant victory for British arms just outside Nasriyeh and in the capture of Nasriyeh itself occupied almost exactly a month. As in all operations in Mesopotamia these were conducted as much by water as by land. Throughout the advance the heat was intense and there were few days that the temperature did not reach 115 degrees in the shade. By day the heat in the iron vessels and the glare from the water were almost intolerable. By night innumerable mosquitos gave little rest to the wearied troops.

The Turks had constructed a dam on the Hakeika channel a short distance outside the Hammur lake. Although the existence of this dam was known it proved a much more difficult obstacle than had been at first expected. The Turks chose the site carefully and expended a vast amount of labour on its construction, for it took the British a week of hard work to pass their by no means numerous ships through it. All this had given time to the enemy to bring up reinforcements and the British were now faced by a force greatly superior in numbers to their own. The enemy occupied an entrenched position on both banks of the channel at the point where it leaves the Euphrates. On the 5th, the British attacked the Turkish position on both sides of the channel. Infantry moved along either bank assisted by the fire of gun-boats which moved up the channel behind them sweeping for mines. A fleet of bellums (small flat-bottomed boats) and the 30th Mountain Battery on rafts moved up the lake with the infantry attack, protecting their flank from a horde of Arabs who threatened an attack from the other side of the lake. The

enemy's trenches were well constructed and were held by a mixed force of Turks and Arabs, but the attack did not falter, and so resolutely did the British push on that they not only occupied the trenches, but, crossing the Euphrates in bellums, they attacked the Turkish artillery position and captured a complete battery.

The Turks retired up the river and on the next day the British pushed on, reaching Asani on the evening of the 6th. On the 8th it became evident that heavy reinforcements had reached the enemy. General Gorringe realised that he must wait until he was in a stronger position to attack, and set work to strengthen his own defences. The last of the reinforcements reached General Gorringe on the 22nd and he made up his mind to attack the enemy on the 24th. It was 6-30 in the evening before they were able to capture the last position at the point of the bayonet, the Turks refusing either to surrender or leave the trenches. That night the naval boats pushed on to Nasriyeh encountering a good deal of opposition as they entered the town. The firing gradually died down, however, and by the time the troops were able to march in, all resistance was at an end. All the artillery which the Turks had at Nasriyeh, 17 guns including one large howitzer, fell into the hands of the British as well as about a thousand prisoners and large stores of rifles and ammunition.

**Kut-al-Amara.**—Any detailed account of the minor operations which led up to the battle on the 27th and 28th September would fill many columns, for the British force had left the lower reaches of the river and was operating 300 miles away from its base, with lines of communication stretching down the winding uncertain course of the Tigris. The Turks had taken up a position on both banks a-tride the river with the intention of preventing the British forces from reaching Kut-al-Amara. The line of defence lay almost north and south, for here the river flows approximately from West to East. A few miles above the Turkish position the river bears again more to the North. A boat bridge crosses the Tigris three miles below Kut-al-Amara. The defences constructed by the Turks stretched for about six miles on either side of the river. An old dry canal bed branches off at right angles to the right bank of the river, and its artificial banks twenty feet high were the only outstanding features in the whole monotonous landscape. A bridge of boats had been constructed at the place of concentration and this bridge was an important factor in General Townshend's plans for attack. Broadly, this plan was to make a demonstration against the enemy's right, that is on the right bank of the river, to give him the impression that this flank was to be the object of the main attack, and then, by means of the bridge to cross to the left bank of the river with the majority of his force and attack the Turkish left. Dawn on the 27th found the whole of the force in position. An immediate start was made, and in a short time the whole of the line was engaged by the enemy's long range fire. The British troops on the right bank developed heavy artillery and infantry fire, driving in the

advanced Turkish troops, in the hope that their right would be reinforced and their left weakened. As soon as light appeared, General Delamain developed his force for attack. The greater part were directed to a flank attack on the enemy's extreme left, while the remainder advanced to a frontal attack against the left portion of the section of defence between the two marshes. General Fry at the same time developed all his strength in the hope of being able to close with the Turks in front of him. Of General Delamain's force, the flank attack soon found that, owing to the extent of the marsh, the route which they would have to take was much more circuitous than had been expected. Meanwhile the frontal attack had become so seriously engaged that General Delamain decided to push home an attack with the troops at his disposal on the extreme left of the Turkish defences in front of him. The infantry rushed forward and captured the first line of trenches at the point of the bayonet. Here their work was by no means finished, for a devastating fire swept them from the rest of this section of the defence which was still in the hands of the enemy. A wheel to the left in the maze of trenches brought them face to face with very strong bodies of Turks and after a gallant attempt to force their way forward they were compelled to await the leading troops of the flanking force which were now coming round the marsh. Junction with these was effected at about half past ten in the morning. Coming in on the right they swept the whole of the Turkish defences between the two marshes from left to right only completing their task at two o'clock in the afternoon. They were failing for want of water, but by marching round the back of the enemy's position between the river and the marsh, General Delamain hoped to reach the river at one of its bends before he was called upon to engage the enemy again. In this hope the column advanced and at about 5 o'clock in the afternoon had reached a point behind the Turkish position about a mile and a half from the river. Here they suddenly came under a very violent artillery fire from the further bank of the river, and General Delamain realising that they could not reach water by that route, determined to attack the Turkish position from the rear, and changing the direction of his column marched straight towards the trenches. This was about half past five and the light was beginning to fail. Hardly had the change of direction been carried out when the British column realised that they were marching parallel to a large force of the enemy's infantry and guns at a distance of about a mile. There was no time for preparation or orders for attack, nor indeed was there any need for them. An order to "right turn" brought the British infantry and guns face to face with the Turkish force. Without firing a shot the troops turned and advanced on the enemy. The Turks had realised the situation at the same moment, but fortune favoured them, for the road along which they were passing lay along the edge of a disused sunken watercut, and they quickly slipped into this. Though suffering heavy losses the British pushed straight on, only pausing to return the



fire before they closed with the enemy. At 200 yards the order was given to fix bayonets and as the whole line surged forward to the final assault the Turks broke from their shelter and fled. This was the force, seven regiments with guns, with which Nur-ud-Din was reinforcing his hard pressed left. The Turks evacuated the whole position during the night, leaving many guns and much ammunition. The Cavalry occupied Kut-al-Amara on the morning of the 29th and the pursuing force reached it by river on the morning of the 30th when Kut-al-Amara was formally occupied by the British.

### The Advance Towards Baghdad.

When the Year Book for 1916 was published, it carried the story of the operations in Mesopotamia as far as the battle of Kut-al-Amara and the occupation of that town; it recorded the appearance of the British forces only sixty miles from Baghdad, and in a public speech Mr. Asquith had forecasted the early fall of the city of the Caliphs. The subsequent narrative of this expedition, recording defeat, loss, suffering and surrender, is one of the most tragic in the military annals of the British Empire.

After the victory of Kut-al-Amara General Townshend pursued the routed Turks with the utmost vigour; but the transport difficulties soon intervened and the pursuit was arrested at Aziziah, thirty miles east of Ctesiphon. Here the force halted for the time; whilst it was here the momentous decision to attempt to take Baghdad was reached. For six weeks reinforcements and stores were brought up to Aziziah and Kut preparatory to the further advance, a task which was made the more onerous by the difficulties of navigation during the season of low water. On November 19th the advance was continued, moving by both banks of the river, and the enemy slowly retired to his prepared position at Ctesiphon. The Turkish lines lay astride the Tigris, covering the approach to Baghdad, which was situated some eighteen miles to the north-west. They consisted of an extensive system of entrenchments forming two main positions. On the right bank the front position extended from the river for about three miles in a S. W. direction, the second line trenches lying some five miles up-stream. On the left bank a continuous line of entrenchments and redoubts stretched from the river for a distance of six miles north-east; the left flank terminating in a large redoubt. On this bank the second line was about two miles behind the front position and parallel to it for about three miles from the Tigris, thence it turned northwards to the DIALA river. The enemy's strength was estimated at thirteen thousand regular troops, with thirty-eight guns in the Ctesiphon position and it was reported that reinforcements were arriving; it was considered important to attack before these fresh troops were brought into action. Our own forces were about 12,000 strong.

**The Battle of Ctesiphon.**—General Townshend's tactics were similar to those employed at Kut-al-Amara—an attack in the centre accompanied by a wide flanking movement designed to turn the enemy's left. After a night march from Laji on the night of the 21st–22nd November the attack was delivered

in the centre and against the north-east flank. A severe action lasting throughout the day resulted in the capture of the whole first position and of thirteen hundred prisoners. Our troops pressed on and established themselves in the second line, where they captured eight guns. They were at once subjected to heavy counter attacks by fresh troops; the guns changed hands several times; and they had finally to be abandoned, as it was found that owing to heavy losses it was necessary to withdraw the troops to the first positions. On the 23rd the troops were reorganised in the position which they had captured and the heavy casualties were collected. Owing to the heavy losses in killed and wounded, especially amongst the officers—we had lost four thousand five hundred, more than a third of the force—it was impossible to renew the offensive, and the Turks, heavily reinforced, attacked the British line on November 23rd–24th, but were repulsed with considerable loss. It was therefore decided to retire to Kut-al-Amara, the decision being quickened by evidence that the Turks were pushing down the left bank of the river and also inland in order to cut off the force. The principal incidents of the retirement were a brisk cavalry engagement east of Kutunie on the 29th, when the enemy's advanced mounted troops were driven back. On the 30th the main force had to halt at Umm-al-Tubal, as the river craft were in difficulties in the shoal water. It was attacked in force at daylight on December 1st when the Turks lost heavily, and taking advantage of a counter attack by the cavalry brigade against a force which was attempting to envelope his right flank, General Townshend broke off the action and made good his retirement to Kut-al-Amara, which was reached on the morning of December 3rd.

**First Relief Measures.**—Within a month the steps to relieve the Kut garrison were taken. On January 4th General Aylmer advanced from Ali-al-Gharbi towards Sheikh Saad, the southern point held by the Turks. The Turks were entrenched astride the Tigris, three and a half miles east of Sheikh Saad and an attempt to turn their right did not succeed, owing to the presence of hostile cavalry and Arabs in force. General Aylmer arrived on the 7th with the remainder of his force, and ordered a general attack on both banks of the river. Very heavy fighting throughout the day followed. By evening the enemy's entrenchments on the right bank of the river had been taken, with six hundred prisoners and two guns, but the enemy held fast on the left bank. On the 9th the Turks were forced to abandon their remaining positions and retired up-stream, followed by our troops. The heavy rain, converting the alluvial soil into liquid mud, made effective pursuit impossible and the Turks took up a fresh position on the Wadi river. General Aylmer having concentrated his whole force attacked the Wadi positions on both banks on the 13th. After a hard fight the Turks were driven out on the 14th, and retired five miles, where they entrenched in the Umm-al-Hanna defile, with their left resting on the Suwalkieh marsh and their right on the river. At this stage General Nixon returned to India and General Sir Percy Lake took supreme command. Experience soon showed that these action



represented from the Turkish standpoint nothing more than strong rearguard actions and that their main positions had not yet been reached.

**Three Phases.**—The subsequent operations for the relief of Kut-al-Amara, with the reasons for their failure, were recorded in a despatch issued by Sir Percy Lake and published in a Gazette Extraordinary on October 13th, 1916. The operations covered in this despatch included three phases.

**1st Phase,** 19th to 23rd January, an unsuccessful attempt to force the Hannah defile, Commander: Lieutenant-General Sir F. Aylmer; **2nd Phase,** 24th January to 10th March, a period of rest and reorganisation followed by the unsuccessful attempt to outflank the enemy's right in the vicinity of the Dujallah redoubt, Commander: Lieutenant-General Sir F. Aylmer; **3rd Phase,** 11th March to 30th April, a brief period of preparation followed by the attack and capture of the Hannah and Falahiyah positions, a failure to force the Sanna-ai-yat position and the fall of Kut, Commander: Lieutenant-General Sir G. F. Goringe.

The general position on the Tigris front on January 19th, 1916, was that General Aylmer's force was encamped on the left bank of the river above the Wadi river, where the advanced troops were in touch with the Turks on the Wadi Umm-al-Hannah position. Unfortunately the first phase of the operations was dominated by a total misconception. It was believed that General Townshend was short of provisions and was anxious about his ammunition supply. There was also the question of forestalling the reinforcements which the Turks were certain to bring down the river. Although therefore there was urgent need to reorganise the force, which had for the most part been hastily transported from Egypt, and the river transport was grievously defective, it was felt that if the relief of Kut was to be effected, it must be attempted at once. It was not until the first phase of the fighting was over that news was received on January 25th that General Townshend was provisioned for eighty-four days. At this time the number of river steamers available was practically the same as when in June of 1915 the small Tigris force began its first advance up the river.

**Rush Tactics Fail.**—After the battle of the Wadi river General Aylmer's troops followed the retreating Turks to the Umm-al-Hannah position and entrenched themselves at the mouth of the defile so as to prevent them from taking the offensive. The weather at this time was extraordinarily unfavourable, for the rains caused the river to overflow, converting the terrain into a bog, the bridge across the Wadi was washed away several times, and the task of bridging the Tigris, here four hundred yards wide, was one of great difficulty. Guns and troops were however ferried across the river so as to co-operate from the right bank by enfilade fire with the main attack, which was delivered on the left. January 20th was devoted to a bombardment of the enemy position and during the night the infantry advanced to within two hundred yards of the Turkish lines. On the morning of the 21st, under cover of an intensive bombardment, the troops moved out to the attack.

On the right the troops, having got to within a hundred yards of the Turkish position, were unable to advance further. The left columns consisting of the Black Watch, 6th Jats and 41st Dogras penetrated the front line with a rush, capturing trenches which they held for about an hour and a half. Supports were sent forward, but losing direction and coming under a heavy fire failed to reach them; left unsupported and being subject to heavy counter attacks, these troops were forced to retire. Rain now fell, converting the terrain into a sea of mud; severe losses were sustained through the enemy's fire; and the assault failed. At dark the troops were withdrawn to the main trenches, thirteen hundred yards from those of the enemy, and a six hours armistice was arranged to bury the dead and remove the wounded. This closed the first phase of the operations. As it was now known that General Townshend was provisioned for eighty-four days the need for precipitate action was no longer felt.

**Success Jettisoned.**—The whole force was reorganised. The hurried improvisation of temporary brigades and divisions, with which the force had been obliged to commence its advance from Al-i-Gharbi was showing its inherent weakness.

Divisions and brigades, the units of which knew each other and had served together in France, had perforce been broken up to meet the difficulties of transport on a long sea voyage. There had been no time on arrival in Mesopotamia to await belated units. In many cases field ambulances had arrived after the combatant units, and brigade and divisional formations had been made up with such units as were first available. This was a severe handicap to the troops and steps were now taken to reconstitute formations as far as possible in their original condition. Throughout the month of February preparations were made for resuming the offensive. Reinforcements were pushed up from the base by steamer and route march, and reorganisation and training were carried on at the front.

The position when the work of reorganisation was completed and conditions were ripe for a fresh advance were briefly these:—On the left bank, the enemy, having been reinforced, still held the Hannah position in force, further in rear were other defensive lines at Falahiyah, Sanna-ai-Yat, Nakhallat and along the northern part of the Es-Sinn position. All, except the last named, had been constructed since the battle of Hannah on the 21st January. They were all protected on both flanks by the Tigris and the Suwaikieh marsh respectively. On the right bank the Es-Sinn position constituted the Turkish main line of defence, with an advanced position near Beit-ai-Essa. The right flank of the Es-Sinn position rested on the Dujallah redoubt, which lay some 5 miles south of the river and 14 miles south-west of the British line on the right bank.

The flood season, which usually sets in about the middle of March, was approaching, and General Aylmer decided, without waiting for reinforcements, to make his great attempt. On this occasion the main attack was delivered on the right bank of the river, in an attempt to turn the Turkish right, which rested on the



**Dujallah redoubt.** Unfortunately the weather, which handicapped the force throughout these operations, obstructed it again, and an interruption caused by rain at the beginning of the month enabled the Turks to close their right by pushing a line of trenches from the Dujallah redoubt to the Shatt-el-Hai.

On the afternoon of March 7th, General Aylmer assembled his subordinate commanders and gave his final instruction, laying particular stress on the fact that the operation was designed to effect a surprise and that to prevent the enemy forestalling us it was essential that the first phase of the operation, *i.e.*, the capture of the Dujallah redoubt, should be pushed through with the utmost vigour. His dispositions were briefly as follows:—The greater part of a division under General Younghusband, assisted by naval gunboats, confronted the enemy on the left bank. The remaining troops were formed into two columns under General Kemball and General Keary respectively, a reserve of infantry and a cavalry brigade being held at the corps commander's own disposal. General Kemball's column, covered on the outer flank by the cavalry brigade, was to make a turning movement to attack the Dujallah redoubt from the south, supported by the remainder of the force operating from a position to the east of the redoubt.

This night march was one of the tactical triumphs of the campaign. Despite the immense difficulties of such an operation, General Keary's column was in position at daybreak ready to support General Kemball's attack. General Kemball's column did not reach the point selected for its deployment in the Dujallah depression until an hour later—a most prejudicial delay.

In spite of their late arrival the presence of so large a force seems to have been quite unexpected by the Turks as the Dujallah redoubt was apparently lightly held. When our column reached their allotted positions prompt and energetic action would probably have forestalled the enemy's reinforcements, but time was lost by waiting for the guns to register and to carry out reconnaissances and when, nearly three hours later, General Kemball's troops advanced to the attack they were strongly opposed by the enemy from trenches cleverly concealed in the brushwood and were unable to take further ground for some time, though assisted by General Keary's attack upon the redoubt from the east. The southern attack was now reinforced and by 1 p.m., had pushed forward to within 500 yards of the redoubt, but concealed trenches again stopped further progress and the Turks made several counter-attacks with reinforcements which had now arrived from the direction of Magash. It was about this time that the corps commander received from his engineer officers the unwelcome news that the water supply, contained in rain water pools in the Dujallah depression, upon which he had reckoned, was insufficient and could not be increased by digging. It was clear therefore that unless the Dujallah redoubt could be carried that day the scarcity of water would of itself compel our troops to fall back. Preparations were accordingly made for a further assault on the redoubt and at 5-15 p.m. attacks were launched from the south

and east. Under cover of a heavy bombardment the 9th and 28th infantry brigades got within 200 yards of the southern face, where they were held up by heavy fire, although reinforced. Meanwhile the 8th infantry brigade, supported by the 37th, had assaulted from the east. The two leading battalions of the former, the Manchesters and 59th Rifles and some of the 37th infantry brigade, succeeded in gaining a foot-hold in the redoubt, but here they were heavily counter-attacked by large enemy reinforcements and, being subjected to an extremely rapid and accurate shrapnel fire from concealed guns in the vicinity of Sinn, they were forced to fall back to the position from which they started. The troops, who had been under arms for some 30 hours, including a long night march, were now much exhausted and General Aylmer considered that a renewal of the assault during the night, 8th-9th March, could not be made with any prospect of success. Next morning the enemy position was found to be unchanged and General Aylmer decided upon the immediate withdrawal of his force to Wadi, which was reached the same night.

**Heroic Failure.**—General Aylmer was then removed from his command, supreme control at the front being vested in Major-General Goringe on March 12. He was in supreme command during the final phase of the operations which extended from the 11th March to the 30th April. General Aylmer returned to India to take command of the Mhow division, which is one of the prize appointments in the Indian Army. Fresh troops now began to arrive up the river and it was decided to renew active operations as soon as the reinforcement was complete. Investigations were made as to the feasibility of an advance on Kut by the right bank from Sheikh Saad. Sir Percy Lake's despatch says that this scheme was abandoned because it was shown that the terrain was not floodproof and might be inundated by cutting the embankments. It is understood, however, that the shortage of land transport was also an important factor in the abandonment of this renewed project to turn to the Turkish right. It was therefore decided to take the Hannah position and to advance up the left bank. The Seventh Division, which had been engaged in sapping up the enemy's front trenches, was continually under heavy fire and hampered by floods. By March 28th the saps were 150 yards from the Turkish front line. On April 1 the 13th Division moved up from Sheikh Saad to relieve them in the front trenches preparatory to the assault. Owing to the heavy rains the assault had to be postponed until April 5 when the 13th Division rushed the Turkish first and second lines in quick succession and by 7 a.m. the whole position was in our hands. The enemy's position was a maze of deep trenches occupying a frontage of only 1,300 yards between the Tigris and the Suwaikieh marsh and extending over 2,600 yards from front to rear. Meanwhile on the right bank the 3rd Division had been gaining ground. In the morning the 8th Infantry Brigade, led by the Manchesters, captured the Turkish position on the Abu Roman mounds. During the day the river rose considerably and it was evident that a fresh flood was coming down. This pointed

to the urgency of capturing the Falahiyah and the Sann-ai-yat positions, three and six miles respectively west of the Hannah position, before the rising river should enable the Turks to flood the country. After nightfall a heavy bombardment was directed at the Falahiyah position after which the 13th Division assaulted and captured a series of deep trenches in several lines and by 9-30 p.m. it was completely in our hands and consolidated. The 7th Division which had hitherto been in support now moved forward and passing through the 13th Division took up a position about 2 miles east of Sann-ai-yat ready to take the northern portion of these entrenchments at dawn on April 6. The line of direction was to be maintained by moving with the left flank along a communication trench which joins the Falahiyah and Sann-ai-yat positions. At dawn when the assault was to have taken place the troops were still some 2,300 yards from the enemy's position owing to the difficulties of the ground, and the advance was checked 700 yards from the Turkish trenches where the advanced line had to fall back on the supporting third line.

During the night, 8th-9th April, the 13th Division took the place of the 7th Division in the trenches and at 4-20 a.m. advanced to the assault on Sann-ai-yat. When within 300 yards of the enemy's front line they were discovered by the Turks who sent up lights and flares and opened a heavy rifle and gun fire. The first line, including detachments of the 6th King's Own Royal Lancaster Regiment, 8th Welsh Fusiliers, 6th Loyal North Lancashire Regiment and 5th Wiltshire Regiment penetrated the centre of the enemy's front line trench. In the glare of the lights the second line lost direction, wavered and fell back on the third and fourth lines. The support thus failed to reach the front line at the critical moment in spite of the most gallant and energetic attempts of the officers concerned to remedy the matter. Our troops, who had reached the enemy's trenches, were heavily counter-attacked by superior numbers and driven back to from 300 to 500 yards from the enemy's line, where the brigades dug themselves. In view of the rapid exhaustion of the supplies in Kut the attack was now changed to the right bank of the river, which offered prospects of a speedier success. On the morning of April 17th the 7th and 9th Infantry brigades assaulted the Beit Aicessa position and took it at the point of the bayonet. The 13th Division was now brought up to support the 3rd in this operation, but the Turks initiated a series of strong counter-attacks. These lasted throughout the night, and although they were repelled with heavy loss—the Turkish losses are estimated at 4,000—they had checked the advance and had regained that portion of Beit Aicessa near the river. As the enemy's defences at Sann-ai-yat showed signs of weakening a further attack was made on the left bank. On April 22nd the assault was delivered, the front being limited to one of a brigade owing to the floods. The first and second line trenches were carried; but only a few men were able to reach the third line; as large Turkish reinforcements came up and delivered a counter-attack our troops had to fall back to their original line. This closed the military operations for the relief of Kut. Sir Percy Lake in his despatch said:—

"General Gorrings's troops were nearly worn out. The same troops had advanced time and again to assault positions strongly held by a determined enemy for 18 consecutive days. They had done all that men could do to overcome not only the enemy but also the exceptional climatic and physical obstacles and this on a scale of rations which was far from being sufficient in view of the exertion they had undergone but which the shortage of river transport had made it impossible to augment. The need for rest was imperative."

An effort was made to run the blockade of Kut with the fast river steamer Julnar, which had been prepared for the purpose, but she was sunk by gunfire with 270 tons of supplies on April 24th. The Royal Flying Corps dropped into Kut eight tons of supplies. But these could make no appreciable difference to the situation and on April 29th Kut surrendered.

**Euphrates and Oil Fields.**—During these three phases practically nothing of importance occurred on other parts of the Mesopotamian Front.

In January the advance against the hostile positions in front of Kut took place. It was thought advisable to make a demonstration northwards to a short distance from our advanced post at Nasiriyah with a view to deterring as many of the hostile tribes on the Hal river as possible from joining forces with the enemy. The major portion of the force at Nasiriyah accordingly moved out at the beginning of January, and encamped in the neighbourhood of Butaniyah Lake early in February. When the object in view had been attained the troops returned to Nasiriyah. On the return journey some of the villages with whom friendly relations hitherto obtained apparently mistaking our movement for a retreat treacherously attacked our rearguard. The attack was beaten off, a party of the Royal West Kents and the 30th Mountain Battery behaving very gallantly. A small force marched out the following morning, from Nasiriyah, surprised and destroyed the offending villages in retaliation for their treachery. Nothing of importance occurred on the Karun line, that country and the neighbourhood of the oilfields as well as the country to the west and the south of Basra remaining quiet and undisturbed.

**The Siege of Kut.**—No account of the siege of Kut-al-Amara has been published and we are dependent on fragmentary items for our knowledge of what occurred. General Townshend was back at Kut on December 3, and almost immediately he was cut off from General Gorrings's division on the line of communications with headquarters at the town of Amara. Within two days the Turks had got round to Sheik Saad, some 40 miles lower down the Tigris, and though a hospital ship about the same time managed to run the gauntlet of the enemy's guns, with some casualties, this was the last traffic that passed down the river. Exhausted as they were, the men had only three or four days to complete the preparations for the defence. It proved sufficient. The Turks, hoping to carry the position before General Townshend was ready, began an assault at once. On December 8th they shelled the defenders all day, and again on the 9th, and

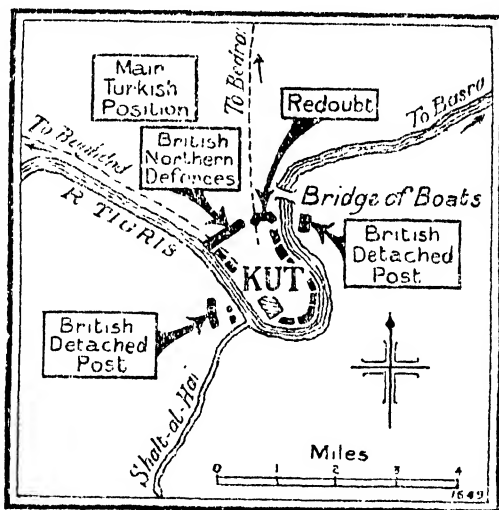
for the whole of the next three days bombardments were varied by infantry attacks from all sides. After this failure the Turks desisted until Christmas. The fresh attacks were less costly to us, but there was one nervous moment when the enemy breached a fort on the right flank of the Kut peninsula, from which, however, the garrison promptly and with great gallantry dislodged him. This was the last serious attack. The Turks made up their minds that the garrison were not to be beaten in open fight, and prepared to starve them out. The beleaguered force was in no enviable position. Kut-al-Amara is a small and dirty village situated in a bend of the Tigris in the midst of the Chaldean desert. Its only outstanding feature is the blue glazed minaret of the local mosque; it has the usual Oriental bazaar, otherwise it consists merely of the mean dwellings of the Arab population. Kut is a place of no resources apart from the traffic passing up and down the river; indeed the Tigris and

the Euphrates are the beginning and the end of all enterprise, military and commercial, in Mesopotamia. The miserable town was full of wounded, for in the first series of attacks alone they had 1,100 casualties and many were suffering from disease. So far as natural conditions were concerned, however, the British were in a better position than the Turks, who were on lower ground, and therefore liable to be flooded out by the river. The official announcement of the surrender said:—

"After a resistance protracted for 143 days and conducted with a gallantry and fortitude that will be for ever memorable, General Townshend has been compelled by the final exhaustion of his supplies to surrender."

"Before doing so he destroyed his guns and munitions."

"The force under him consists of 2,970 British troops of all ranks and services, some 6,000 Indian troops and their followers."



**Criticism and Action.**—The close of the siege brought to a head the indignation widely felt at the conduct of the operations. Even before the battle of Ctesiphon, complaints had been received that the treatment of the sick and wounded fell lamentably short of modern requirements, but the numbers concerned were comparatively small. The evil grew to dreadful proportions with the extension of the operations. It is commonly reported that for the battle of Ctesiphon provision was made for only five hundred casualties; there were four thousand five hundred. The medical arrangements completely collapsed; wounded were brought down the river on horse boats prac-

tically untended; and a mass of preventible suffering and loss of life was caused. In January affairs went from bad to worse. The attacks initiated first under the orders of General Nixon and afterwards by General Aylmer were delivered before the medical arrangements were organised; the new divisions were thrown into the fight before their ambulances and field hospitals had arrived. As their casualties were heavy, the suffering was deplorable. As soon as this reached the ears of Lord Hardinge, then Viceroy, he appointed a small Commission consisting of Sir William Vincent, I.C.S., Member of Council for Bihar and Orissa, and General Bingley, to inquire into the position. The

Commission was subsequently strengthened by the addition of Mr. J. R. Ridsdale, who had visited India for the purpose of arranging for the distribution of Red Cross funds. This Commission took evidence in India and in Mesopotamia and reported in June; although definite assurances were given to Parliament that the report would be published, it has not yet seen the light. As one result of this action the wounded in the March and April fighting were far better tended; but a fresh phase supervened. The season which followed the fall of Kut was unusually hot and sickly. Cases of heat-stroke, typhoid, para-typhoid, cholera and dysentery occurred in very large numbers. The transport was so bad that there was no proper treatment for the sick, nor food for the well. These criticisms gathered force; they were accentuated by the failure of the relief operations and the vagueness of the discussion regarding the responsibility for the advance from Kut to Baghdad. Bowing to the storm, the Government appointed a Parliamentary Commission to examine the whole situation. It consists of Lord George Hamilton, Chairman; Lord Donoughmore and the following members of the House of Commons:—Lord Hugh Cecil, Sir Archibald Williamson, and Mr. Hodge, and it is now sitting.

Meanwhile drastic action was taken in Mesopotamia and in India. General Aylmer's recall has already been recorded. In August General Goringe laid down his command and sailed for England. In September General Lake was summoned to London "to give evidence before the Mesopotamian Commission." He has been succeeded in the command by General Maude, with General Cobbe and General Marshall as his principal Army Commanders. In September Sir Beauchamp Duff, Commander-in-Chief in India, was also summoned to London to give evidence before the Commission and in accordance with the statutory conditions governing his appointment relinquished his office. He was succeeded by General Sir Charles Monro, commanding the First Army in France, who arrived in India on October 4 and immediately proceeded to Mesopotamia without landing, transhipping in Bombay Harbour. Many other changes in the personnel in Mesopotamia were made. In February the War Office took charge of the operations, and subsequently assumed control of the river transport, which has nearly doubled its capacity. A railway from Basra to Nasiriyah and another

from Kurna to Sheikh Saad were sanctioned.

**Responsibility for the Advance.**—When the full tale of the operations was told there was a natural demand to know who was responsible for the advance to Baghdad, especially when it gradually became known that the Imperial General Staff had sanctioned the advance to Kut-al-Amara with considerable misgivings. In June there was published a small White Paper giving, *inter alia*, General Townshend's appreciation of the position after the battle of Kut-al-Amara and the arrest of the pursuit at Azizliah. In this he said that it would be taking a grave risk to continue a strategic movement against Baghdad with his weak Division alone, the British battalions of which were reduced to half their strength, the drafts to replace the casualties amongst the Indian troops at Kut-al-Amara consisted of raw recruits, whilst there were no troops in support and the distance to the sea was over three hundred miles. In a telegram from Azizliah, after the pursuit was stayed, he put his opinion into definite words. He said that if it was the desire of Government to occupy Baghdad, "unless great risk is to be run, it is in my opinion absolutely necessary that the advance from Kut by road should be carried out methodically by two Divisions or one Army Corps or by one Division supported closely by another complete Division, exclusive of the garrisons of the important places of Nasiriyah, Ahwaz and Amara."

It is understood that instead of the two full Divisions demanded, General Townshend was reinforced only by a Brigade of Infantry, two regiments of Cavalry and a Horse Battery. A reinforcement of two Divisions was brought to Basra later, but it arrived long after the battle of Ctesiphon had been fought and when it arrived, all its movements were hampered by lack of transport. In the House of Commons it was stated that the advance was taken with the approval of the local Commander, General Nixon, of the Government of India, of the Imperial General Staff and of the Cabinet. Pending the issue of the report of the Committee of Inquiry no definite view can be expressed; still it may be said that everything points to the conclusion that the advance was precipitated by the desire of the Home Government to find a counterblast to the evacuation of the Gallipoli Peninsula and the overrunning of Serbia, and that all subsequent misfortunes arose from this cause.

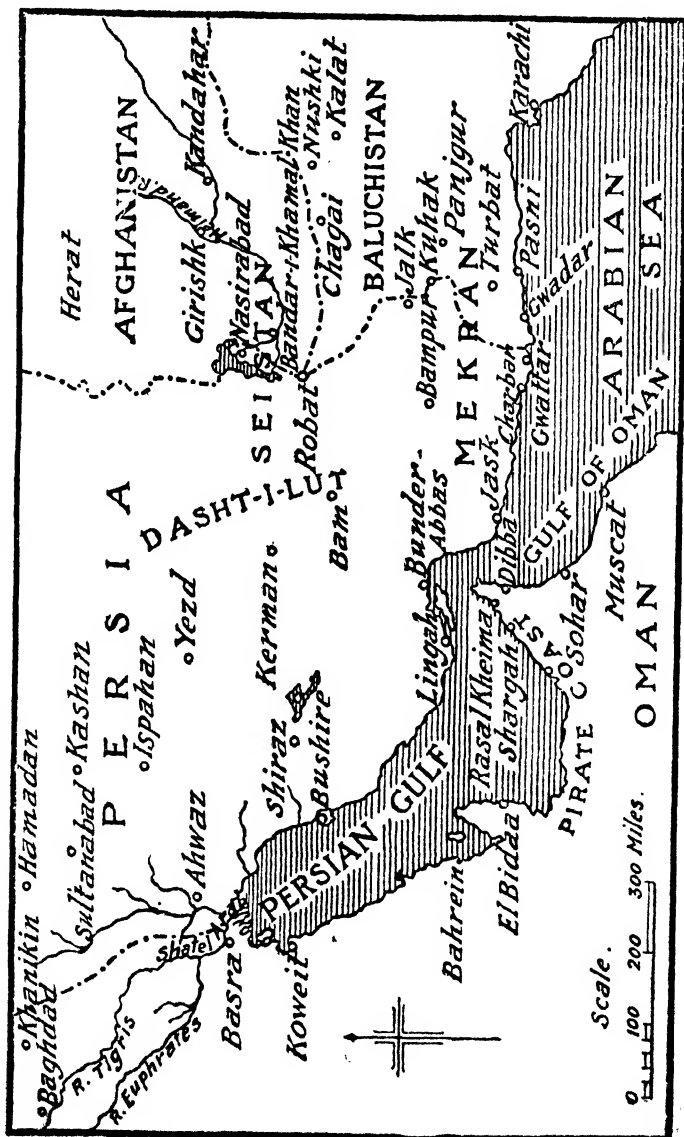
## THE PERSIAN GULF.

The situation in the Persian Gulf, which is at present the corner stone of the Indian frontier problem, is one of baffling indefiniteness. Our first appearances in these waters was in connection with the long struggle for supremacy with the Portuguese, the French and the Dutch, who had established trading stations there. With the capture and destruction of the great entrepot which the Portuguese had established at Ormuz, and the supersession of the land route by the sea route, coupled with the appearance of anarchy in the interior, the importance of the Gulf declined. The Indian Government remained there primarily to preserve the peace, and this task it has since successfully

performed. Piracy, which was as destructive as the ravages of the Barbary corsairs, was stamped out, the Trucial Chiefs who occupy the Pirate Coast were gradually brought into close relations with the British Government, and the vessels of the Royal Navy have since kept watch and ward in the Gulf, whilst our Consuls have regulated the external affairs of the Arab rulers on the Arabian Coast.

### A Policy of Abnegation.

In return for these services Great Britain has claimed no selfish advantages. The waters of the Gulf are as free to the navigation of other flags as to the Red Ensign. The only terri-



torial possession is the tiny station of Bassidu. Point after point has at one time or another been occupied by British troops. Muhammerah and the lower valley of the Karun valley were occupied during the war with Persia in 1857. Bushire was long held in the same connection, and still bears marks of our regime in the one tolerable road. The Island of Kharak was occupied from 1828 to 1842, and again in 1857. We had a military station at Kais during the Pirate wars, and a military and naval station at Kishm from 1820 to 1879. Jask was occupied as a cable station, but subsequently returned to Persia. The only surveys of the waters are British; the only cables are British; the few navigation marks are maintained by the British India Company, and two steamship services, a last mail service and a slow trading service, are run by the same corporation. Apart from these direct acts, Great Britain might at any time have seized the whole Arabian Coast and the Persian shore. But in pursuit of a resolute self-denying ordinance she has kept the peace and demanded no reward.

### European Intrusions.

Left to herself, Great Britain would desire no other policy. But the affairs of the Persian Gulf have passed into the region of international politics, and the past quarter of a century has witnessed successive efforts to turn the British position. Basing her interference on a treaty which gives her equal rights with Great Britain, France attempted to acquire a coaling station at Jissa, near Maskat, and subsequently obstructed British efforts to stamp out the slave trade, and the arms traffic, which was supplying weapons of precision to the tribes on our North-Western Frontier. Turkey, whether acting on her own volition, or as the *avant courier* of Germany, threatened the territory of the Sheikh of Bahrein, who is in special relations with us, and of the Sheikh of Kowelt, who owns the only harbour which would make a Gulf terminus of the Baghdad Railway. Persia, stirred from Teheran, when Russian influence at the court of the Shah in Shah was supreme, established a foreign Customs service in the Gulf, and pressed our good friend, the Sheikh of Muhammerah, Russia and Germany sent heavily-subsidised merchant ships into the Gulf, in order to establish trading rights, and posted Consuls, where there was neither trade nor legitimate interest. The last of these machinations, a German attempt to wring a concession from the Sheikh of Shargah, was comparatively recently defeated. The collapse of authority in Persia has raised, in an acute form, the whole future of the Persian shore. In short, the situation has changed from one where the influence of Great Britain was supreme, to one where it is challenged at every point, more especially by the indirect process of commercial strategy, at which a nation, brought up in the traditions of free trade, is handicapped.

### The Gulf and the Empire.

With these attacks there has come a closer appreciation of the bearing of the Persian Gulf on the defence of the Indian Empire. The strategic importance of these waters has been laid down by a writer of unchallenged

authority and unblinded mind. Writing in the *National Review*, Admiral Mahan said, "Concession in the Persian Gulf, whether by formal arrangement (with other Powers) or by neglect of the local commercial interests which now underlie political and military control, will imperil Great Britain's naval situation in the Farther East, her political position in India, her commercial interests in both, and the Imperial tie between herself and Australasia." Following this, successive British Governments have made declarations of policy which are satisfactory, as far as words can go. Speaking in the House of Lords on May 5, 1903, Lord Lansdowne, then Secretary of State for Foreign Affairs, said "We (i.e., His Majesty's Government) should regard the establishment of a naval base or of a fortified port in the Persian Gulf by any other Power as a very grave menace to British interests which we should certainly resist with all the means at our disposal." This declaration of policy has since been endorsed by Sir Edward Grey. But the question which arises is whether, in view of the intrusion of foreign Powers with aggressive designs, and the changing conditions on the littoral, the purely negative policy which has hitherto satisfied Great Britain will suffice. It is a hard fact but a true one, that if British authority disappeared to-morrow, it would leave no other relic than the Abadan oil refinery; a few consular buildings and the tradition of justice and fair dealing. That is a question which can best be considered after a brief survey of the various jurisdictions which are established in the Gulf.

### Maskat.

Maskat, which is reached in about forty-eight hours from Karachi, is outside the Persian Gulf proper. It lies three hundred miles south of Cape Musandim, which is the real entrance to the Gulf, but its natural strength and historical prestige combine to make it inseparable from the politics of the Gulf, with which it has always been intimately associated.

The approach to Maskat is dramatic. The mail steamer gently feels her way along a coast more black and forbidding even than the iron-bound littoral of the Gulf of Suez, which is so familiar to the eastward passenger. Suddenly there appears on the coast the white houses of the trading settlement of Mattra, which lies to the north of Maskat. Then with a sharp turn the bow of the steamer passes under a gaunt rock painted with the names of the warships which have visited Maskat for half a century, and enters the landlocked harbour. Twin fortresses erected by the Portuguese command the heights which overlook the town; the town itself clusters on the shore and climbs the high ground behind it, and itself is shut off from the Arabian desert by a stout wall on the landward side. Formerly Maskat was part of a domain which embraced Zanzibar, and the Islands of Kishm and Larak, with Bunder Abbas on the Persian shore. Zanzibar was separated from it by agreement, and the Persians succeeded in establishing their authority over the possessions on the eastern shore. Sultan Syed Feyzul, the intelligent Arab ruler, who reigned over Maskat only, though

he claimed a shadowy suzerainty over the chiefs on the coast of Oman, died in October 1913.

The relations between Britain and Maskat have been intimate for a century and more. It was under British auspices that the separation between Zanzibar and Maskat was effected, the Sheikh accepted a British subsidy in return for the suppression of the slave trade and in 1892 sealed his dependence upon us by concluding a treaty pledging himself not to cede any part of his territory without our consent. Foreign intrigues with Maskat did not commence until 1894, when the French, in pursuit of the pin-pricking policy through which they were avenging Egypt, and perhaps to assist Russia, established a consulate there. The Sultan was induced to cede to France a coaling station at Jisra, but this was such a clear violation of the Treaty of 1892 that it could not make good, and France had to accept the poor alternative of a leased depot. A more serious dispute arose over the use of the French flag to cover the slave trade. Native craft would secure the protection of the French flag by registering at Jibutli, and then defy the Sultan of Maskat, and they were enabled to traffic in slaves with impunity, inasmuch as there was rarely a French warship in the neighbourhood to search them. In April 1903 the trouble came to a head, and the French flagship *Infarnet* was sent to Maskat to demand the release of dhows which had been arrested for a flagrant breach of the quarantine rules. This emphasised the necessity of a permanent settlement, and the question was referred to the Hague Tribunal, and a working compromise arranged. It was adjudged by the Hague Tribunal in 1905 that "after January 2, 1892 France was not entitled to authorise vessels belonging to subjects of H. H. the Sultan of Maskat to fly the French flag," except on condition that their "owners or fitters-out had established, or should establish, that they had been considered and treated by France as her protégés before the year 1893," though "owners of dhows who before 1892 had been authorised by France to fly the French flag retained this authorisation as long as France renewed it to the grantee." The conclusion of the *entente* with France put an end to those pinpricks, but one important issue remained outstanding until 1914. France claimed under the Anglo-French Treaty of 1862 freedom of trade with Maskat. There was carried on for years a lucrative arms traffic with the Gulf, rifles and ammunition being shipped from Europe to Maskat, and thence distributed all over the littoral and even to the North-West Frontier of India. The extent of this evil compelled the British Government to intervene, and elaborate arrangements were made to check the traffic by arresting the dhows carrying arms and by harrying the gunrunners ashore. This is more fully considered under Gunrunning (q. v.) In effect, the British warships had to witness the dumping of cargoes on the shore at Maskat, see them loaded into dhows, and trust to their own vigilance to arrest these consignments on the high seas. Prompted by the Colonial Party, the French Government refused to yield one jot of their treaty rights, in the hope that Great Britain would buy them out by

surrenders at Gambia. The difficulty was largely overcome by the establishment of a bonded warehouse for arms at Maskat, where all consignments have to be deposited, and whence they are only issued under certificates of destination; and by an agreement negotiated in 1914 the French Government recognised the new Arms Traffic Regulations and abandoned the privileges and immunities secured to them by Treaty. Compensation was paid by the British Government to those French merchants whose stocks were rendered valueless by the Regulations.

In 1873 jurisdiction was given to the Vice-Admiralty Court at Aden and the consuls within the dominions of Zanzibar, Maskat, and Madagascar for the more effectual suppression of the slave trade on the East Coast of Africa. By an Order-in-Council which came into force on August 1, 1914, the Act had been extended so as to comprise the Court established by the Persian Coast and Islands Order-in-Council, 1907. Thus the Consuls-General for Fars and the coasts and islands of the Persian Gulf will be able to enforce the suppression of the slave trade in that neighbourhood which was agreed to be desirable in a treaty made with the Persian Government so long ago as 1832.

The Sultans have been in a difficult position for a good many years. They hold their capital of Maskat, the adjacent town of Matra, one or two other coast towns, and certain points in the interior, but as they possess few troops they find themselves unable to control the roving Beduin who wander at will over most of the State. When the Beduin want money they were wont to ride down to Matra, the centre of the date trade, and threaten to sack the town. The late Sultan, who died in 1913, was generally compelled to bribe them to go away. The rising which began in 1913 was a more serious affair. A Pretender, Shrikh Abdullah, seized the inland town of Semail, which stands in a spacious fertile valley where are grown most of the dates for which Maskat is famous. Great Britain has special interests at Maskat, based upon various documents, the chief of which is one drafted in 1891-2. The late Sultan asked us to protect him against the Pretender. We said we would protect his capital and coasts, but could not send an expedition into the interior against the elusive Beduin. We sent Indian troops to Maskat, and they have been there ever since. It is quite probable that the tribesmen were excited by the news of the Great War, and determined to push their own operations more vigorously. The rising culminated in an attack on the outpost of Maskat on the 10th and 11th January 1915. Detachments of the 95th Infantry and the 102nd Grenadiers had previously been sent to support the Sultan's forces and the attack was driven back, the rebel casualties amounting to 300 men. There were no further attacks, and the rebels were reported to be greatly disheartened.

British Consul, E. B. Howells, I.C.S.  
Agency Surgeon, Vacant.

### The Pirate Coast.

Turning Cape Musandim and entering the Gulf Proper, we pass the Pirate Coast, controlled by the six Trucial Chiefs. The ill-

name of this territory has now ceased to have any meaning, but in the early days it had a very real relation to the actual conditions. The pirates were the boldest of their kind, and they did not hesitate to attack on occasion, and not always without success, the Company's ships of war. Large expeditions were fitted out to break their power, with such success that since 1820 no considerable punitive measures have been necessary. The Trucial Chiefs are bound to Great Britain by a series of engagements, beginning with 1806 and ending with the perpetual treaty of 1853 by which they bound themselves to avoid all hostilities at sea, and the subsequent treaty of 1873 by which they undertook to prohibit altogether the traffic in slaves. The relations of the Trucial Chiefs are controlled by the British Resident at Bushire, who visits the Pirate Coast every year on a tour of inspection. The German attempt to obtain a concession from the Sheikh of Shargah has been mentioned. A more serious question arose in 1912 when a landing party from H. M. S. Fox, searching for contraband arms at Debal, was fired at by the resident Arabs and five men killed and nine wounded. The Sheikh made ample amends to the British Resident, and submitted to a fine. There was at first the suspicion that this *emeute* arose from the spread of pan-Islamism on the coast, studiously fostered from Constantinople, and that it indicated a weakening respect for British authority. But fuller enquiries tended to show that it arose from an unfortunate series of misunderstandings. The commercial importance of the Pirate Coast is increasing through the rise of Debal. Formerly Lingah was the entrepot for this trade, but the exactions of the Belgian Customs officials in the employ of Persia has driven this traffic from Lingah to Debal. The Trucial Chiefs are—Debal, Abu Thabee, Sharrah, Ajman, Um-al-Gawain and Ras-el-Khyma.

### Bahrain.

North of the Pirate Coast lies the little archipelago which forms the chieftainship of the Sheikh of Bahrain. Of this group of islands only those of Bahrain and Maharak are of any size, but their importance is out of all proportion to their extent. This is the great centre of the Gulf pearl fishery, which, in a good year, may be worth half a million pounds sterling. The anchorage is wretched, and at certain states of the tide ships have to lie four miles from the shore, which is not even approachable by boats, and passengers, mails and cargo have to be landed in on the donkeys for which Bahrain is famous. But this notwithstanding the trade of the port is valued at over a million and a quarter sterling, and the customs revenue, which amounts to some eighty thousand pounds, makes the Sheikh the richest ruler in the Gulf.

Bahrain has passed through more than usually chequered experiences. Not the least formidable of these are the efforts of the Turks to threaten its independence. These took definite form in the third quarter of the last century, when Midhat Pasha, Vali of Basra, occupied the promontory of El Kater, as well as El Katif, over against Bahrain, and converted El Hassa into a district. The war with Russia put an end to these designs, but they were revived and the Turks at El Kater are still a

menace to Bahrain, but negotiations for their withdrawal are pending. The Sheikh by the treaty of 1861, entered into special engagements with the British Government, by whom his rights are guaranteed.

In the neighbourhood of Bahrain is the vast burying ground which has hitherto baffled archaeologists. The generally accepted theory is that they are relics of the Phœnicians, who are known to have traded in these waters.

*Political Agent, Capt. T. C. W. Fowle.*

### Kowelt.

In the north-west corner of the Gulf lies the port which has made more stir than any place of similar size in the world. The importance of Kowelt lies solely in the fact that it is the one possible Gulf terminus of the Baghdad Railway. This is no new discovery, for when the Euphrates Valley Railway was under discussion, General Chesney selected it under the alternative name of the Grane—so called from the resemblance of the formation of the Bay to a pair of horns—as the sea terminus of the line. Nowhere else would Kowelt be called a good or a promising port. The Bay is 20 miles deep and 5 miles broad, but so shallow that heavy expense would have to be incurred to render it suitable for modern ocean-going steamers. It is sheltered from all but the westerly winds, and the clean thriving town is peopled by some 20,000 inhabitants, chiefly dependent on the sea, for the mariners of Kowelt are noted for their boldness and hardihood.

The political status of Kowelt would baffle the ingenuity of the international jurist to find a definition. Nominally the Sheikh owns allegiance to the Sultan of Turkey, from whom he has accepted an honorary title of Kaimakam, or Local Governor. In practice, he has always been independent. In 1890 the Turks attempted to convert their nominal sovereignty into something more actual; but the Sheikh Mubarak approached the British Government and placed his interests under their special protection. When, however, the German surveyors earmarked Kowelt for the terminus of their line, the position of the Sheikh was indirectly attacked. To the north of Kowelt there is a deep indentation in the low-lying shore chiefly occupied by the swampy island of Bubyah. Here a long narrow channel runs to Umm Khasa, the Khor Abdulla. It is sometimes held to be an alternative to Kowelt as a Gulf terminus, and with a view to earmarking it, the Turks have established military posts at Umm Khasa and on Bubyah island. Threatened by domestic feuds, raids by sea, and attack by land, Sheikh Mubarak, with a British backing, has fended off all assaults on his position, and with realisation of the fact that Basra must, in any circumstances, be the commercial terminus of the Baghdad Railway, the importance of Kowelt has tended to recede.

*Political Agent, Major R. E. A. Hamilton.*

### Muhammerah

On the opposite side of the entrance to the Shatt-el-Arab lie the territories of a Sheikh who stands to the Persian Government in much the same relation as does the Sheikh of Kowelt of Kowelt to the Government of Turkey—Sheikh Kharza of Muhammerah. Nominally, he is



subject to Teheran; on whose behalf he governs his territories as Governor; in practice he is more like a semi-independent vassal. In personal characteristics, too, Sheikh Khazzal has much in common with Mubarak; he has proved that he possesses many of the qualities of an administrator, and has resisted Persian encroachments on his authority in all directions save one—despite his strong antipathy to the agents of a centralised government, the Persians have installed an officer of their Belgian Customs service at Muhammerah. The town, favourably situated near the mouth of the Karun River, has grown in importance since the opening of the Karun River route to trade through the enterprise of Messrs. Lynch Brothers. This route provides the shortest passage to Ispahan and the central tableland, and already competes with the older route by way of Bushire and Shiraz. This importance has grown since the Anglo-Persian Oil Company established refineries at Muhammerah for the oil which they win in the rich fields which they have tapped near Ahwaz. Its importance will be still further accentuated, if the scheme for a railway to Khorremabad by way of Dizful matures. A concession for a road by this route has long been held by a British Company, and surveys for a railway are being made. There is a tacit assurance from the Persian Government that if a practicable scheme is put forward, they will facilitate the work. Such a line, meeting the projected branch from Teheran to Khamnikin, would intercept the trade of Central Persia and make Muhammerah the principal outlet for the commerce of the country. Sheikh Khazzal is believed to have formed an excellent working understanding with his brother chief across the water, and as the head of the great Kaab tribe he is no mean power in south-western Persia.

Consul at Ahwaz, Captain E. W. C. Noel.

Consul for Arabistan (Muhammerah), Asst. Surgeon C. H. Lincoln.

### Basra.

In a sense Basra and Turkish Arabistan can hardly be said to come within the scope of the frontiers of India, yet they are so indissolubly associated with the politics of the Gulf that they must be considered in relation thereto. Basra is the inevitable sea terminus of the Baghdad Railway. It stands on the Shatt-el-Arab, sixty miles from its mouth, favourably situated to receive the whole water-borne trade of the Tigris and Euphrates Rivers. This is already considerable, although Turkish obstruction has closed the Euphrates to navigation, as well as the Tigris above Baghdad—between Basra and Baghdad there were two services of river steamers, one controlled by Messrs. Lynch Brothers and the other by a Turkish Company. The local traffic is valuable, for the richness of the date groves on either side of the Shatt-el-Arab is indescribable, there is a considerable entrepot traffic, whilst Basra is the port of entry for Baghdad and for the trade with Persia, which follows the caravan route via Kerman-shah and Hamadan. When the Baghdad Railway is open, Basra must absorb the whole trade of the eastern zone, that is the trade which finds an easier outlet on the east than at Alexandria on the Mediterranean. That is

without taking account of the possibilities of the irrigation scheme prepared by Sir William Willcocks, which should revive the glories of ancient Mesopotamia, and make Arabistan another Egypt. Even now ocean-going steamers trade regularly with Basra and load grain in bulk from its wharves. The one obstacle to the development of the port is the bar at the entrance to the Shatt-el-Arab, where there are no more than ten feet of water at low tide, and where steamers drawing more than sixteen to eighteen feet have, even at high tide, to discharge part of their cargoes into lighters before making the river. The cost of dredging the bar would not be large, and that done a first class port is almost ready made at Basra. Nothing can prevent it from becoming the port of the Middle East, and if ever the Baghdad Railway is extended to the Gulf, it will be for political not for commercial reasons.

Political Resident and H. M. Consul-General for Turkish Arabia (Baghdad), vacant.

Residency Surgeon and Assistant to the Resident, vacant.

British Consul, Mr. F. L. Crow.

### The Persian Shore.

The Persian shore presents fewer points of permanent interest. The importance of Bushire is administrative rather than commercial. It is the headquarters of Persian authority, the residence of the British Resident, and the centre of many foreign consuls. It is also the main entrepot for the trade of Shiraz, and competes for that of Ispahan. But the anchorage is wretched and dangerous, the road to Shiraz passes over the notorious kotals which preclude the idea of rail connection, and if ever a railway to the central tableland is opened, the commercial value of Bushire will dwindle to insignificance. Further south lies Lingah, reputed to be the prettiest port on the Persian coast, but its trade is being diverted to Debal on the Plate Coast. In the narrow channel which forms the entrance to the Gulf from the Arabian Sea is Bunder Abbas. Here we are at the key of the Gulf. Bunder Abbas is of some importance as the outlet for the trade of Kerman and Yezd. It is of still more importance as a possible naval base. To the west of the town between the Island of Kishm and the mainland, lie the Clarence Straits which narrow until they are less than three miles in width, and yet contain abundance of water. Here, according to sound naval opinion, there is the possibility of creating a naval base which would command the Gulf. The great obstacle is the climate, which is one of the worst in the world. On the opposite shore, under the shadow of Cape Musandim, lies another sheltered deep-water anchorage, Elphinstone's Inlet, where the climate conditions are equally vile. But between these two points there is the possibility of controlling the Gulf just as Gibraltar controls the Mediterranean. For many years Bunder Abbas loomed large in public discussions as the possible warm water port for which Russia was seeking. Now it has reappeared in connection with the Trans-Persian railway. It is understood that the British Admiralty insist on that line meeting the sea at Bunder Abbas; where it

would enter the British zone, and whence, along the Coast of Mekran, it would be commanded from the sea. The Russian concessionaires wish the line to strike the sea much further east either at the actual British frontier, Gwettur, or at Chahbar, where there are believed to be the makings of a deep-water port. So far the project has not passed beyond the stage of academic discussion. (q. v. *Railways to India*). On the Mekran coast, there is the cable station of Jask, and the possible port of Chahbar. The British Government temporarily occupied Bushire in 1915 in circumstances narrated in *Persia* (q. v.)

### **The Admiralty Oil Contract.**

A further complexity was introduced into the position in Southern Persia, and inferentially into Gulf politics when the British Government, on behalf of the British Admiralty, entered into partnership with the Anglo-Persian Oil Company for the development of their oil fields in the neighbourhood of Maldan-i-Naphtun.

**The Concession.**—The concession which the company was joined in 1909 to work was originally obtained in 1901 from the Persian Government by Mr. W. K. D'Arcy. It granted the exclusive right for 60 years "to drill for, produce, pipe, and carry away oil and petroleum products throughout the Persian Empire except in the provinces of Azerbadjan, Gililan, Mazenderan, Asdrabad, and Khorassan." The area covered is about 500,000 square miles. In 1903 a First Exploitation Company was formed as a preliminary with a capital of £600,000, of which £544,000 has been issued; £20,000 in shares in this company was allotted to the Persian Government, as well as £20,000 in cash, in return for the concession. When the Anglo-Persian Company was started in 1909 the actual holding of this Exploitation Company was limited to one square mile in the Maldan-i-Naphtun field, situated in territory belonging to the Bakhtiari Khans. Under the terms of a separate agreement the latter received 3 per cent. of the shares in any company formed to work oil in their country; and a second subsidiary company was then created, known as the Bakhtiari Oil Company, with a capital of £400,000, in order to cover the area within their territory outside the square mile allotted to the First Exploitation Company. In the First Exploitation Company the Anglo-Persian Company now owns £478,460, or 87·95 per cent. of the capital, and Persian shareholders £65,540 or 12·05 per cent.; in the Bakhtiari Company the Anglo-Persian Company owns £388,000, or 97 per cent. The Persian Government is paid a royalty of 16 per cent. on the net yearly profits. The fact that both the Government and the Bakhtiari tribes are interested in the prosperity of the company is regarded as an important factor in securing its position in a country otherwise rather unruly.

**The Fields.**—Oil has so far been found in quantity at Maldan-i-Naphtun, at depths of 1,200 ft. to 1,800 ft., in hard porous limestone, and has been proved at Kasr-i-Shirin; surface indications of petroleum, which are very highly thought of, have also been observed at Whita

Oil Springs, Kishm, Daliki, Ahmadi, Rudan Kuh Champs, and other places. The present production of the company is obtained entirely from the Maida-i-Naphtun area, where 30 wells have been drilled; it lies 140 miles N.N.E. of Muhammerah, which is at the junction of the Shatt-al-Arab and Karun rivers. The oil is conveyed 150 miles by pipe-line to the refinery at Abadan, while materials have to be transported to the field by river and across a difficult country by mules. The workings are entirely under the charge of British subjects; the skilled labour is mainly recruited from India, and the unskilled labourers are largely Persians, no difficulty having been experienced in securing an adequate supply. The Bakhtiari Khans "police" the field works and upper sections of the pipe-line, and an agreement has been made with the Sheikh of Muhammerah for the protection of the refinery and the lower section.

**The Contract.**—Under the agreement the Government are to subscribe for £2,000,000 in ordinary shares of the company, £1,000 in preference shares, and £190,000 in debentures, which will bring the aggregate capital in shares and debentures to £4,790,000. The existing ordinary shares are £1,700,000 and preference £900,000 so that under the new arrangement the Government will hold the preponderating interest in the share capital. The debentures already existing amount to £600,000. The six per cent. Preference shares, which participate to the extent of 2 per cent. in dividends after payment of 6 per cent. on the ordinary, rank equally for voting purposes. The price at which the Admiralty will obtain the oil itself is kept a secret. "The supply contract," says the Admiralty Memorandum, "will be regarded in the public interests as confidential." But it is stated that "provision is made for the supply for a term of years on a favourable scale of price of a reasonable proportion of the total estimated annual requirements of the Admiralty on the present basis of policy of oil consumption, and with due allowance for expansion. The contract is for oil only, and the Admiralty will make its own arrangements for transport." The agreement was criticised in some quarters on the ground that it involved the British Government in indefinite commitments in Southern Persia, and that it might be necessary to employ troops to defend Government property on foreign soil, that of Persia. But on the whole the agreement was well received in the belief that it secured the British Navy an abundant supply of cheap oil fuel. Since the conclusion of the Agreement the storage capacity at Abadan has been very largely increased. The pipeline was cut by the Turks in 1915, but subsequently restored.

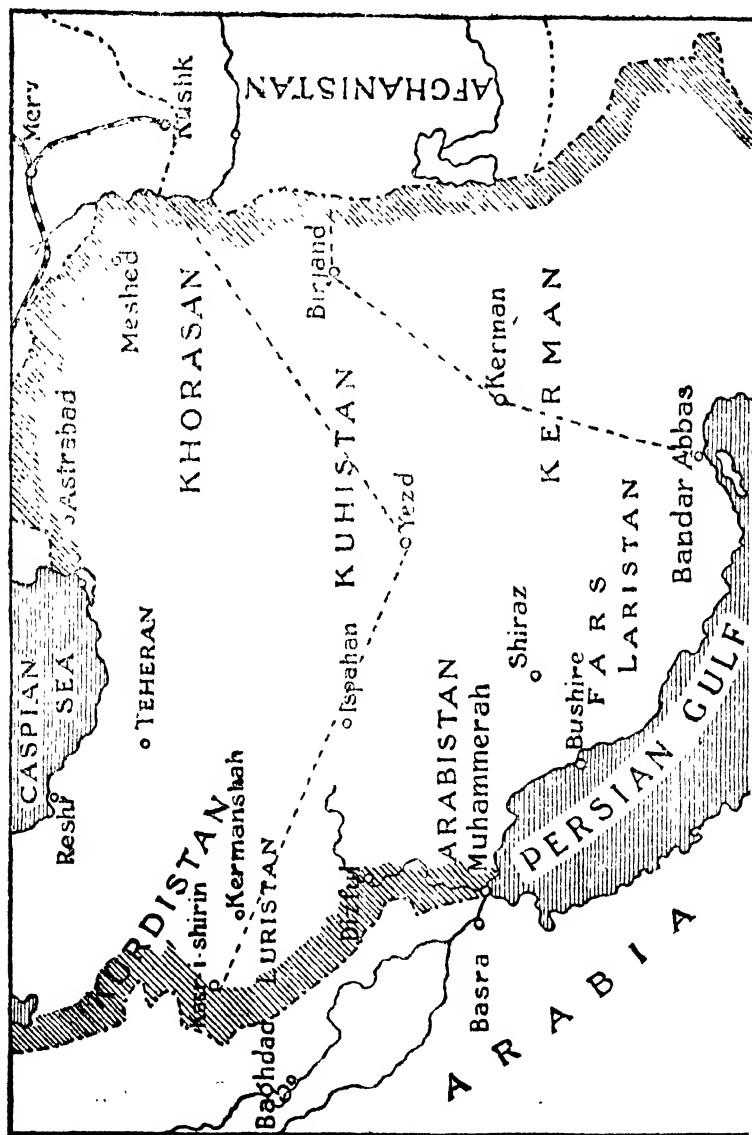
*Political Resident in the Persian Gulf,*  
Sir Percy Cox, K.C.S.I., K.C.I.E., O.S.I.

*Deputy Political Resident,* Major A. K. Trevor,  
O.I.E.

*Residency Surgeon at Bushire,* Major J. McPherson.

*Consul at Kerman,* Lt.-Col. C. T. Durat.

*Consul at Bender Abbas and Assistant to the Resident,* W. R. Howson.



### Summary.

From this brief summary of the conditions in the Persian Gulf, it will be seen that the British position is a nebulous one. We have stamped out piracy, we have kept the peace, we have sought no exclusive privileges, the commerce of these waters is freely open to the ships of all nations. But this policy is in the main negative rather than positive; it is so barren of definite territorial achievements that it is singularly open to attack; it depends for its permanent success on the maintenance of the *status quo* in a part of the world where conditions are fast changing nor was it in any way regularised by the Anglo-Russian agreement. On the contrary, by that instrument the British zone stopped short at Bunder Abbas, the British sphere being restricted to the east of a line drawn from the Afghan frontier to Gazik, Bijand, Kerman and Bunder Abbas. All Persia between this line and the delimitation of the Russian zone by a line from Kas-i-Shirin, Ispahan, Yezd, and Kakh, to the junction of the Persian, Afghan, and Russian frontiers—that is to say the whole of the Persian Gulf littoral—is in the neutral zone. The Agreement made no mention of the Persian Gulf, but with the Convention a letter was published from Sir Edward Grey to the British Ambassador at Petrograd announcing that the Persian Gulf lay outside its scope, but that the Russian Government had stated during the negotiations that it did not deny the special interests of Great Britain in the Gulf and it was intimated that Great Britain reasserted them.

At the present time, of course, the politics of the Persian Gulf and of Turkish Arabistan are in a state of uncertainty owing to the war. Before the war broke out, active negotiations were conducted between the British, the Turkish and the German Governments with a view to the regularisation of the whole situation. On more than one occasion it was announced that they were on the verge of completion. The outline of these negotiations was that the Baghdad railway should proceed as far as Basra as a purely German-Turkish enterprise, but that it should not proceed beyond Basra without the approval of the British Government. Great Britain was to receive two directors on the Board to guard against differentiation of rates. The Sheikh of Kuwait was to recognise the suzerainty of Turkey, but he was not to be interfered with, and Turkey was to accept the treaty of 1899. The Turkish post at El Kater, opposite to Bahrein was to be withdrawn, but incessant acts of veiled hostility at Baghdad and Basra in September and October indicated that the attitude of Turkey in the great war could not be relied upon, despite the repeated assurances of neutrality by the Grand Vizier. In October therefore a British-Indian force was sent to the Gulf, landing at Bahrein, to be ready for all emergencies. It caused little surprise then when the official announcement was received that the Turkish warships in the Black Sea had committed acts of war by firing on Russian ships and bombarding Russian coast towns. The progress of this force is recorded in the opening pages of this section.

### GUNRUNNING IN THE PERSIAN GULF.

The question of gunrunning in the Persian Gulf is inseparable from the position on the North-Western Frontier, because the copious supplies of modern rifles, with suitable ammunition, from this source have transformed the military value of the tribesmen. Prior to 1897 this trade, though considerable, concerned Turkey and Persia rather than Great Britain. Arms were brought from Europe, France, Belgium, and England, to Maskat, where they were discharged and freely distributed round the Persian and Arabian shores. The Frontier tribesman had to obtain his modern rifle by stealing, even if it meant the murder of a sentry, or else content himself with the jezail, or the rough country-made rifle, which is turned out in small numbers by the Kohat Pass Afghans. But after the rising of 1897 these rifles began to filter into the North-Western Frontier, replacing the homely jezail. The Sultan of Maskat issued a proclamation empowering British and Foreign men of war to search for arms, and the first consignment seized was in the s. s. Baluchistan. Still the traffic grew, and in 1902 steps were taken to check it through the instrumentality of the Governor of Kerman. As his authority was inconsiderable, in 1907 the Government began to see that the traffic had assumed proportions which could not be neglected. In the year 1907-08 the value of the arms imported into Maskat reached a total of £270,000, and it is estimated that between 1905 and 1911 no fewer than 200,000 rifles and millions of rounds of ammunition reached the Afghan borderland through Maskat. In 1909

a rigorous blockade was instituted in the Persian Gulf and the Gulf of Oman.

#### France and Maskat.

The seat of trouble lay in the French commercial treaty with Maskat, and in the refusal of the French Government to abrogate it, except as the price of concessions in West Africa. Under this treaty arms were openly discharged at Maskat, and dumped down in the town, under the eyes of the British Consular officers and men of war. They were then shipped in dhows across to the Mekran Coast by Arab dhows, and landed on the Persian shore. There Persian Baluch sirdars received them, and transported them to spots in the interior, where the Afghan caravans were waiting. These caravans were for the most part manned by Ghilzais, who transported the rifles right across Persia and Afghanistan to Kandahar, whence they were distributed throughout the frontier. It is impossible to gauge the extent of the trade, but thirty thousand rifles are reported to have been run to Kandahar in a single year and the supply became so plentiful that it was no longer worthwhile to steal rifles in India, nor to manufacture them in the Kohat Pass.

#### Naval Blockade.

Forced into indirect measures through the obstruction of France the Government instituted the naval blockade. For this purpose the ships of the East Indies Squadron were supplemented by a number of launches and boats

The effect of these measures was so marked that it nearly precipitated a serious outbreak on the North-West Frontier. The Pathans who returned from Mckran Coast about the beginning of June 1910 reported that they had been unable to obtain rifles, because the British ships had put an end to the trade. At the same time cash in advance had been paid for these rifles and the money lay in the possession of the traders at Maskat. Between the rifles and the Mekran Coast, where they could be landed, was the seine of the British cordon. Excitement was rife, and only the exceptional tact of the British Officers prevented an *emeute*. Further preventive measures were taken to break up the power of Barkhat Khan,

December 1910 to search for rifles was actively opposed and five Bluejackets were killed and nine wounded. Under the threat of bombardment the Sheikh of Debai submitted to a heavy fine. In 1912, the traffic was brought under still closer control by an arrangement with the Sultan of Maskat by which all arms landed at that port are placed in a bonded warehouse and only issued on a certificate of destination.

The agreement was finally sealed when, in 1914 the French Government recognised the new Arms Traffic Regulations, and abandoned the privileges and immunities secured by Treaty. Compensation was paid to the French merchants whose arms were virtually impounded. The traffic is now dead.

## PERSIA.

The concentration of public attention on the Persian Gulf has been allowed to obscure the frontier importance of Seistan. Yet it has been a serious preoccupation with the Government of India. Seistan lies midway north and south between the point where the frontiers of Russia, Persia and Afghanistan meet at Zulfiakar and that where the frontiers of Persia and of our Indian Empire meet on the open sea at Gwattur. It marches on its eastern border with Afghanistan and with Baluchistan, it commands the valley of the Helmand, and with it the road from Herat to Kandahar, and its immense resources as a wheat-producing region have been only partly developed under Persian misrule. It offers to an aggressive rival, an admirable strategic base for future military operations; it is also midway athwart the track of the shortest line which could be built to connect the Trans-Caspian Railway with the Indian Ocean, and if and when the line from Askabad to Meshed were built, the temptation to extend it through Seistan would be strong. Whilst the gaze of the British was concentrated on the North-West Frontier, and to possible lines of advance through Kandahar to Quetta, and through Kabul to Peshawar, there can be little doubt that Russian attention was directed to a more leisurely movement through Seistan. If the day came when she moved her armies against India.

### Anglo-Russian Agreement.

Whether with this purpose or not, Russian intrigue was particularly active in Seistan in the early years of the century. Having Russianised Khorassan, her agents moved into Seistan, and through the agency of the Belgian Customs officials, "scientific missions" and an irritating plague cordon, sought to establish influence, and to stifle the British trade which was gradually being built up by way of Nushki. These efforts died down before the presence

of the McMahon mission, which, in pursuance of Treaty rights, was demarcating the boundary between Persia and Afghanistan, with special reference to the distribution of the waters of the Helmand. They finally ceased with the conclusion of the Anglo-Russian Agreement. Since then the international importance of Seistan has waned. Whether on account of the Agreement, which bars the line of advance through Seistan, or because of the discovery of an easier route, we cannot determine, but Russian activities in railway construction have been diverted to the Trans-Persian route, which would take a direct line through Teheran from Baku, and meet the Arabian Sea at Bunder Abbas or Chahbar.

The natural conditions which give to Seistan this strategic importance persist. Meantime British influence is being consolidated through the Seistan trade route. The distance from Quetta to the Seistan border at Killa Robat is 465 miles, most of it dead level, and it has now been provided with fortified posts, dak bungalows, wells, and all facilities for caravan traffic. The railway has been pushed out from Spezand, on the Bolan Railway to Nushki, so as to provide a better starting point for the caravans than Quetta. This railway is now to be extended into Seistan.

Owing to the activities of certain Germans and other enemy subjects in Persia during the latter half of 1915, it was found necessary to strengthen our outposts on the borders of Seistan. The troops under the command of Lieutenant-Colonel J. M. Wikeley, 28th Light Cavalry, have successfully carried out their orders and co-operated effectively with the Russian forces.

### Text of the Agreement.

This Agreement, which aimed at an amicable settlement of all questions likely to disturb the

friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular, was signed on August 31st, 1907, and officially communicated to the Powers in St. Petersburg on September 24. After reciting the desire of both Governments to maintain the integrity of Persia, and to allow all nations equal facilities for trade in that country, the Convention states that in certain parts, owing to their geographical proximity to their own territories, Great Britain and Russia have special interests. Accordingly (Art. I.): To the north of a line drawn from Kasr-i-Shirin, Isfahan, Yazd and Khakh to the junction of the Persian, Russian and Afghanistan frontiers, Great Britain agrees not to seek for itself or its own subjects or those of any other country any political or commercial concessions, such as railway, banking, telegraph, roads, transport or insurance, or to oppose the acquisition of such concessions by the Russian Government or its subjects. II. Russia gives a similar undertaking concerning the region to the south of a line extending from the Afghan frontier to Mazk, Birjand, Kerman and Bandar Abbas. III. Russia and Great Britain agree not to propose, without previous agreement, the granting of concessions to subjects of either country in the regions situated between the lines above mentioned. All existing concessions in the regions above designated are maintained. V. The arrangements by which certain Persian revenues were pledged for the payment of the loans contracted by the Shah's Government with the Persian Banque d'Escompte and credits and the Imperial Bank of Persia before the signing of the Convention are maintained. In the event of any irregularities in the redemption or service of these loans Russia may institute a control over the revenues situated within the zone defined by Article I. and Great Britain may do the same in the zone defined by Article II. But before instituting such a control the two Governments agree to a friendly exchange of ideas with a view to determining its nature, and avoiding any action in contravention of the principles of the Convention.

With the Convention a letter was published from Sir E. Grey to the British Ambassador at St. Petersburg announcing that the Persian Ministry had laid outside its scope, but that the Russian Government had stated during the negotiations at St. Petersburg that it did not deny the special interests of Great Britain in the Gulf; and it was intimated at Great Britain re-asserted them.

### Chaos in Persia.

So far from improving the domestic situation in Persia, the Convention preluded a condition thinly disguised anarchy. There was no security for life or property outside the zone commanded by the Russian troops in the north, and in 1913, the Central India Horse, a solitary Indian Regiment sent to Shiraz, was withdrawn. A dismal picture of Persian disorder was drawn in the Persian Blue Book published in July, 1913. Lord Curzon, summarising it in a debate in the House of Lords on July 28 said:—"The picture delineated in this Blue-book of Southern Persia is a picture of a country in the throes of dissolution, given up to lawlessness and brigandage, where trade is at a standstill, where armed bands rove about the

country doing as they please, where British officers are fired at and robbed, and in one particular unfortunate case an officer was killed; a country where the central Government is impotent and local government ignored."

"In Northern Persia—and I must discriminate between Northern and Southern Persia—the conditions are very different. I do not say there is no insecurity, but life and property are relatively safe in Northern Persia, and this is owing to the presence of an overwhelming force of Russian troops in that part of the country."

Lord Morley thus indicated the Government's policy. "I will put that common policy in seven propositions—(1) maintaining the spirit and the letter of the Anglo-Russian Convention; (2) maintaining the independence of Persia and avoidance of partition and an approach to partition, economical, administrative, geographical, political; (3) while faithful to the stability of our present alliance and to our real engagements we are faithful also in an equal degree to the good of Persia; (4) to uphold some form of constitutional Government; (5) to lose no chance of easing the distracted situation in which the Persian Government now is, by counsel, attention, and such assistance as from time to time we may consider it prudent to give; (6) to enable Persia by money or otherwise to restore order on the southern roads; (7) to avoid entangling ourselves in a policy of adventure in Southern Persia. I am inclined to add an eighth proposition, namely, that we must beware of being forced into a position which would offend the opinion and sentiment of Mahomedans in India."

Throughout War conditions in Persia have been extremely unsatisfactory. On the outbreak of the war the Persian Government assured the British Government of its neutrality and expressed the hope that the territory of Persia would not become the scene of hostilities. Nevertheless roving bands of Germans and Austrians, armed with rifles and machine guns, wandered through the country, trying to stir up trouble, and as was the case with Turkey, provoke Persia to take hostile action against the Allies. As the fruit of this pernicious activity the British Consul at Isfahan was fired at and slightly grazed by a bullet whilst his Indian orderly was killed. More serious trouble occurred in the South, at Bushire. On July 12th the presence of hostile tribesmen in the vicinity of the town was reported at the Residency. Major Oliphant, of the 96th Regiment, and Captain Ranking, Assistant Political Officer, with a mixed patrol of Infantry and sappers, went out to reconnoitre. Whilst returning the patrol was ambushed and came under a hot fire from a well-concealed enemy. Both British officers were killed, with one sepoy, and two were wounded. The tribesmen afterwards disappeared. In August the state of lawlessness prevailing amongst the tribesmen of the hinterland and the danger to the lives and property of British subjects in that region, compelled the Government to assume temporary occupation of the port of Bushire. The troops engaged in this duty were attacked on the night of the 8th-9th September by a body of tribesmen numbering some 600, led by two notorious local chieftans. Reserves were



brought up and we drove the enemy at the point of the bayonet from the nullahs on the east of the island where they had collected. The cavalry then charged through the fugitives, and the guns which had been brought up to the low cliffs at the edge of the island kept them under fire for two or three miles across the flat marshy plain lying between the island and the mainland. Our casualties were:—Killed Major Pennington, 12th Cavalry, attached 16th Cavalry; 2nd-Lieutenant Thornton, I.A.R., attached 16th Cavalry. Wounded:—2nd-Lieutenant Robinson, I.A.R., attached 96th Infantry; Lieutenant Scudmore, 11th Rajputs, Lieutenant Laville, 11th Rajputs and Lieutenant Staples, 11th Rajputs.

The Persian Government having taken steps to ensure the security of British interests and the maintenance of order, the British occupation, by mutual arrangement between the two Governments, terminated on October 16th. The new Persian Governor, Darya Begi, arrived in a British launch, which had been sent to meet him at Shif, and was received at Bushire by the British Military Governor the Civil Administrator and Senior Naval officers with their staffs who conducted him to the flag-staff where a guard of honour was drawn up. The Persian Governor warmly expressed his gratitude on behalf of his Government and himself for the reception, which the British representatives had accorded to him.

Towards the close of 1915, matters were brought to a head. The British and Russian Ambassadors were received by the Shah, who openly declared that he was a friend of the two countries. During the year, he said, the Germans had done their utmost to drive Persia into war with Russia. Prince Eyn-ul-Daul and Prince Firman Firma, who are Russophiles, entered the Cabinet; the German, Austrian and Turkish Ministers left Teheran. It was afterwards announced that a force of rebels, under Turks and Germans, entrenched in the mountainous region, had been expelled near the Turkish frontier by Russians. Mulkber-el-Sultaneh, a former Governor-General of Southern Persia, the hot-bed of anti-English intrigue, was recalled and Prince Masrat-el-Sultaneh, an uncle of the Shah, sent to succeed him with an adviser friendly to the Entente. Later an anti-British affray was reported from Shiraz. On November 10th the British Consul,

the manager of the Imperial Bank of Persia, and other male British subjects were seized and sent southwards to tribal territory, where they were detained but well-treated. The British prisoners were sent under escort to Bushire and there handed over to the British authorities unharmed. This outrage was perpetrated by the Swedish-officered gendarmerie in defiance of the orders of the Persian Government, who expressed their deep regret and promised reparation.

During the second year of the war events in Persia ebbed and flowed. A strong Russian force under General Baratoff was the means of restoring the Shah's authority over a large area. Marching from Kaavin it expelled the Germans and their heterogeneous following of Turks and Persian rebels from Isfahan and Kum and turning westwards drove them from Kermanshah and Hamadan over the frontier. The Russians also seized Kasr-i-Shirin and Khannikin on the road to Baghdad, and at one time seemed to be in a position to co-operate with the British forces in the advance on Baghdad. A small detachment of Cossacks from his force actually joined hands with the British. But the failure of the operations to relieve Kut-ul-Anara and the surrender of that place released two Turkish Divisions for service elsewhere. An overwhelming superiority of numbers was concentrated against General Baratoff and he withdrew from his advanced positions, the Turks occupying Kermanshah and Hamadan. An effort to move north in the direction of Kaavin however met with sharp defeat. In Eastern Persia a British-officered force of gendarmerie under Sir Percy Sykes occupied Kerman and expelled the rebels who had acted with German assistance.

With a view to releasing funds for the efficient internal administration and observance of neutral obligations, Persia arranged with Great Britain and Russia for a moratorium in respect of interest and amortization of their loans, but the service of the British Public Loan of 1911 was not affected.

*H. B. M.'s Consul General and Agent of the Government of India in Khurasan:—Lieut.-Colonel W. G. Grey.*

*H. B. M.'s Consul in Sistan and Kain:—Major F. B. Prideaux, C.I.E.*

*Medical Officer and Vice-Consul:—Major D. Heron, I.M.S.*

## THE INDEPENDENT TERRITORY.

There yet remains a small part of British India where the King's writ does not run. Under what is called the Durand Agreement with the Amir of Afghanistan, the boundary between India and Afghanistan was settled, and it was delimited in 1903. But the Government of India have never occupied up to the border. Between the administered territory and the Durand line there lies a belt of territory of varying widths, extending from the Gomal Pass in the south, to Kashmir in the north; this is generically known as the Independent Territory. Its future is the keynote of the interminable discussions of frontier policy for nearly half a century.

This is a country of deep valleys and secluded glens, which nature has fenced in with almost inaccessible mountains. It is peopled with wild tribes of mysterious origin, in whom Afghan, Tartar, Turkoman, Persian, Indian, Arab and Jewish intermingle. They have lived their own lives for centuries, with little intercourse even amongst themselves, and as Sir Valentine Chirol truly said "the only bond that ever could unite them in common action was the bond of Islam." It is impossible to understand the Frontier problem unless two facts are steadily borne in mind. The strongest sentiment amongst these strange people is the desire to be left alone. They value their



Independence much more than their lives. The other factor is that the country does not suffice even in good years to maintain the population. They must find the means of subsistence outside, either in trade, by service in the Indian Army or in the Frontier Militia; or else in the outlet which hill-men all the world over have utilised from time immemorial, the raiding of the wealthier and more peaceful population of the Plains.

### Frontier Policy.

The policy of the Government of India toward the Independent Territory has ebbed and flowed in a remarkable degree. It has fluctuated between the Forward School, which would occupy the frontier up to the confines of Afghanistan, and the school of Masterly Inactivity, which would leave the tribesmen entirely to their own resources, punishing them only when they raided British territory. Behind both the policies lay the menace of a Russian invasion, and that coloured our frontier policy until the Anglo-Russian Agreement. This induced what was called *Hit and Retire* tactics; in the half century which ended in 1897 there were nearly a score of punitive expeditions, each one of which left behind a legacy of distrust, and which brought no permanent improvement in its train. The fruit of the suspicion thus engendered was seen in 1897. Then the whole Frontier, from the Malakand to the Gomal, was ablaze. The extent of this rising and the magnitude of the military measures which were taken to meet it compelled a consideration of the whole position. The broad outlines of the new policy were laid down in a despatch from the Secretary of State for India, which prescribed for the Government the "limitation of your interference with the tribes, so as to avoid the extension of administrative control over tribal territory." It fell to Lord Curzon to give effect to this policy. The main foundations of his action were to exercise over the tribes the political influence requisite to secure our imperial interests, to pay them subsidies for the performance of specific duties, but to respect their tribal independence and leave them, as far as possible, free to govern themselves according to their own traditions and to follow their own inherited habits of life without let or hindrance.

### New Province.

As a first step Lord Curzon took the control of the tribes under the direct supervision of the Government of India. Up to this point they had been in charge of the Government of the Punjab, a province whose head is busied with many other concerns. Lord Curzon created in 1901, the North-West Frontier Province, and placed it in charge of a Chief Commissioner with an intimate frontier experience, directly subordinate to the Government of India. This was a revival of a scheme prepared by Lord Lytton in 1877, and often considered afterwards, but which had slipped for lack of driving power. Next Lord Curzon withdrew the regular troops so far as possible from the advanced posts, and placed these fortresses in charge of tribal levies, officered by a handful of British officers. The most successful of these is the Khyber Rifles,

which have steadfastly kept the peace of that historic Pass. At the same time the regular troops were cantoned in places whence they could quickly move to any danger point, and these bases were connected with the Indian Railway system. In pursuance of this policy frontier railways were run out to Dargai, and a narrow-gauge line, sluice converted to the broad-gauge, was constructed from Kushalgarh to Kohat at the entrance of the Kohat Pass, and to Thal at the mouth of the Kurram Valley. These railways are being completed by lines to Tonk and Bannu. By this means the striking power of the regular forces was greatly increased. Nor was the policy of economic development neglected. The railways gave a powerful stimulus to trade, and the Lower Swat Canal converted fractious tribesmen into successful agriculturists. This policy of economic development is receiving a great development through the completion of the Upper Swat Canal (*q. v.* Irrigation). Now it is completed there are other works awaiting attention.

### Greater Peace.

So far this policy has been completely justified by results. During Lord Curzon's Viceroyalty there was no frontier expedition. The recalcitrancy of the Mahsud Waziris necessitated punitive measures, but they took the form of a blockade. Critics have declared that the blockade was scarcely distinguishable from an expedition, but that is a secondary matter. It was not until 1908 that the peace of the border was directly disturbed, and then the continued recalcitrancy of the Zakka Khel sept of the great Afridi tribe compelled the Government to take action. General Willcocks, moving swiftly down the Chura Pass, and Colonel Ross-Koppel taking the Khyber Rifles down the Bazar Valley inflicted such condign punishment on them that they were glad to accept terms of peace negotiated by the main Afridi tribe. A month later, action was necessary against the Mohmands. In this case the rebellious tribesmen were actively supported by Afghan levies, assembled and fitted out in Afghan territory at Lalpura. Two brigades entered their country and defeated them. There was a diversion when lashkars numbering nearly twenty thousand moved up from Afghanistan and threatened the British post of Landi Kotal in the Khyber. They too were driven back into Afghan territory, and the trouble was at an end. The Amir, who had been strangely quiescent, asserted his authority and the irregular warfare waged from Afghan territory ceased.

### Policy Justified.

These expeditions have been seized upon by critics to condemn the present policy. They justify it. Thanks to the confidence engendered by ten years of non-aggression, the disturbed area was localised, the Khyber was kept open, the Afridis lent their aid in concluding peace. For these reasons, when the Government of India proposed the occupation of further strategic points in order to control the Zakka Khels, the Secretary of State wisely imposed his embargo. The strength of the

position was still further demonstrated when in 1910 the tribesmen suffered heavy losses in consequence of measures to suppress the arms traffic (q. v. Gun-running). The frontier is always in a state of suppressed ferment. No one knows what will happen to-morrow. But the tribesmen, feeling confident in the knowledge that no attack on their independence is contemplated and growing richer in consequence of the development of trade and agriculture, are more easily handled. With the removal of the Russian menace, or rather its transference to Persia, the importance of the North-West Frontier has tended to subside. There are still heard mutterings of the necessity for a reversion to the forward policy, and for the occupation of the Independent Territory right up to the Durand line. But they are not regarded seriously. The tribesmen are so saturated with rifles and ammunition, as the result of importations from the Persian Gulf, that the task would be long and costly. When it was achieved the frontier problem would only have shifted. Instead of a frontier against the Independent tribesmen, India would have a frontier against Afghanistan, and the problem would still be present, only in an aggravated form.

### The Frontier and the War.

The history of the Independent Territory during the year was one of unrest, though this was local and sporadic, and did not take the form of a concerted disturbance, such as that which embarrassed the Government of India in 1897.

During October and November 1914, various reports were received that attempts were being made to stir up fanaticism along the Frontier. At the end of November 1914, certain influential mullahs in Independent Territory led a Khostwal lashkar of some 2,000 men to the neighbourhood of Miranshah in the **Tochi Valley**. On November 29th, a portion of the North Waziristan Militia under Major G. B. Scott, attacked the enemy and, in a skillfully fought action, inflicted a severe defeat on the tribesmen who fled in a demoralised condition. The prompt and vigorous action of the North Waziristan Militia checked what might have been a serious rising.

On January 7th, 1915, operations were carried out by the Bannu Moveable Column and a portion of the North Waziristan Militia with a view to defeating a large Khostwal lashkar that had crossed into British territory and attacked Spina Khaisora post. Of the British forces, only the North Waziristan Militia were actually engaged with the enemy, but the operations were successful, the enemy losing some 50-60 men killed and being driven in confusion over the frontier. On March 26th, 1915, the Bannu Moveable Column together with a portion of the North Waziristan Militia moved out from Miran Shah and attacked a large Khostwal lashkar, estimated at 7,000 to 8,000 men, which was threatening that place. The attack was entirely successful. The enemy's losses were estimated at 200 killed and 300 wounded and they retreated rapidly across the frontier.

With the exception of raiding, this portion of the frontier remained quiet until October 1915, when unrest among the **Mahsuds** necessitated precautions being taken in the **Derajat Brigade area**. A militia piquet was attacked on November 12th and on the 18th a detachment of the 45th Rattray's Sikhs on picketting duty near Khajuri Kach in the Gomal was fired upon by some 80-100 Mahsuds. The successful operations combined with pressure brought to bear upon the Mahsuds by the civil authorities prevented any tribal outbreaks on a considerable scale, but raiding has been constant, which has necessitated constant vigilance and action on the part of the troops.

Towards the end of 1914 information was received of anti-British preaching by certain mullahs in the **Mohmand country** but, with the exception of a raid in the neighbourhood of Shabkadar in January 1915, which was easily driven off, no serious acts of aggression were committed. On April 13th, 1915, however, reports were received that the Mohmands were collecting with a view to raiding Shabkadar. During May 1915 the Swatis had been engaged in inter-tribal quarrels, but on June 18th the situation in Upper Swat, where the advance of a lashkar to the Adinial tract threatened the safety of the Chitral road and Chakdara post, necessitated the concentration at Chakdara of the Malakand Moveable Column. The rapid concentration of the troops had an excellent effect and prevented any outbreak.

Gatherings in **Buner** during July 1915 had been reported, but the tribesmen remained quiet until August 15th, when information was received that a certain mullah, known as the Hajj Sahib of Turangzai, was in the Ambela Pass with several thousand men, preparing to invade British territory. His gathering included a number of the Hindustani fanatics, a sect inhabiting the Buner border country. A small column from Mardan was at once moved to Rustam on the Buner border. On August 17th, a hostile gathering of some three to four thousand tribesmen debouched from the Ambela Pass and moved towards Rustam, while a further force was reported to be in the neighbouring hills to the north-west. Brigadier-General S. F. Crocker at once attacked the Ambela Pass gathering and routed it with loss. A Brigade under the command of Brigadier General N. G. Woodyatt, at Rustam, took the offensive against the tribesmen whenever they appeared and during this period Brigadier-General Woodyatt was engaged with the enemy on three occasions, on all of which he was successful in driving them back into the hills with loss and destroying the villages in which they had harboured.

While these operations were in progress information was received that on August 20th a tribal gathering of some fifteen to twenty thousand men under the Sandaki mullah was advancing down the left bank of the **Swat river** to invade Lower Swat. Our outposts were heavily attacked on the night of the 28th-29th August, but the enemy were driven off with loss. The next morning the column moved out and destroyed a fort and shelled several villages, which were occupied by the enemy. As a result of these operations the tribesmen

dispersed, and made no further attempts at offensive action for some time.

During August 1915, there had been some talk of Jihad on the Mohmand border, where various religious leaders had been active, and large tribal gatherings led by these fanatical mullahs, were reported to have collected on August 28th. Two brigades with a mounted column under Brigadier-General S. F. Crocker and Divisional Artillery, were therefore ordered up to the neighbourhood of Shabkadar between August 30th, and September 2nd, while a Mobile Column under Lieutenant Colonel A. B. Longden, 38th Dogras, was formed at Mardan and subsequently moved to Abazai. On September 3rd large bodies of tribesmen were observed moving in the foothills and preparing Sangars in the vicinity of Hafiz Kor, but no steps were taken to prevent them collecting as it was desired to entice them out into the plain. By the evening of September 4th it was calculated that the hostile force had reached its maximum strength (it was then about ten thousand) and Major-General F. Campbell, C.B., D.S.O., Commanding 1st Peshwar Division, decided to attack. The action was fought on the following day; the enemy resisted stoutly and displayed great bravery, tenaciously holding on to their sangars, but were defeated with heavy loss and driven from their position. An opportunity occurred for cavalry action and a successful charge was made against the tribesmen.

Between September 20th and 24th further hostile gatherings were reported on this border and the mullahs made great efforts to stir up their fellows to invade British territory. No lashkar, however, crossed the border until early in October 1915 when lashkars, numbering some 9,000 men, again collected in the neighbourhood of Hafiz Kor. Major-General Campbell, who had strengthened his force by another brigade under Brigadier-General N. G. Woodyatt, took the offensive against this gathering on October 8th from Shabkadar. The enemy offered strong opposition, especially on our right flank, where the Mobile Column from Abazai was co-operating, but were defeated and forced back into the hills. A detachment of the Khairab Rifles from Fort Michni took part in the fight. In this operation armoured

cars were used for the first time in action in India and proved of great value. These successful operations brought the unrest among the Mohmands to an end.

Although further gatherings were reported in Swat there was no actual outbreak until October 1915, when the tribesmen again became active. Their lashkars rapidly increased, and on October 26th some 3,000 Bajauris advanced towards Chakdara, with a view to arousing the tribes of Dir and Swat to attack the fort at that place. The Malakand Movable Column, at once decided to attack; and moving out from Chakdara Camp on October 27th, he engaged, routed, and pursued the enemy, who were severely handled and lost a standard. As the result of this action there was no further gathering on this border.

In October 1916 the Mohmands again became restive, necessitating close precautions, but no actual outbreak occurred.

As for the nomenclature of the Frontier tribes, the term Pathan is not racial. It is used to denote status, and is generally used of the Frontier tribes and their connections. Furthest to the South, on the borders between the North-West Frontier Province and Baluchistan, are found the Shiranis, who are an Afghan people. Waziristan is inhabited by the Waziris, who have two main branches, the Mahsud Waziris, found in Southern Waziristan, and the Darwesh Khel Waziris, mostly in Northern Waziristan. The latter have two main sections, the Utmanzai and the Ahmadzai, and these again are subdivided into numerous clans. In the Kurram the Tuis (who unlike their neighbours are Shi'ahs) form the strongest element. In the Khyber region the main tribes are the Orakzai and the Afridis, both found in the mountainous country south of the Khyber Pass (commonly called Tirah; both are extensively subdivided, the strongest sections of the Orakzai being the Lashkarzai and the Masozai, and of the Afridis the Malik Bin Khel, the Zakkai Khel, the Kambar Khel and the Kuki Khel. Between the Khyber Pass and the Kabul River are the Mullagoris, and further south the Mohmands and the Utman Khel. Beyond these are the Yusufzai, who form the bulk of the inhabitants of Swat and Dir. Chitral is inhabited by races whose origin is obscure.

## AFGHANISTAN.

The relations of Afghanistan with the Indian Empire are dominated by one main consideration—the relation of Afghanistan to a Russian invasion of India. All other considerations are of secondary importance. For nearly three-quarters of a century the attitude of Great Britain toward successive Amirs has been dictated by this one factor. It was in order to prevent Afghanistan from coming under the influence of Russia that the first Afghan War of 1838 was fought—the most melancholy episode in Indian frontier history. It was because a Russian envoy was received at Kabul whilst the British representative was turned back at All Masjid that the Afghan War of 1878 was waged. Since then the whole end of British policy toward Afghanistan has been to build up a strong independent State, friendly

to Britain, which would act as a buffer against Russia, and so to order our frontier policy that we should be in a position to move large forces up, if necessary, to support the Afghans in resisting aggression.

### Gates to India.

A knowledge of the trans-frontier geography of India brought home to her administrators the conviction that there were only two main gates to India—through Afghanistan, the historic route to India, along which successive invasions have poured, and by way of Sistan. It has been the purpose of British policy to close them, and of Russia to endeavour to keep them at any rate half open. To this end having pushed her trans-Persian railway to Samarkand Russia thrust a military line from Merv

to the Kushklinsky Post, where railway material is collected for its immediate prolongation to Herat. Later, she connected the trans-Siberian railway with the trans-Caucasian system, by the Orenburg-Tashkent line, thus bringing Central Asia into direct touch with her European magazines. She was, until recently, credited with the determination to build the Termez railway, which would menace north-east Afghanistan just as the Kushklinsky line does north-west Afghanistan. Nor has Great Britain been idle. A great military station has been created at Quetta. This is connected with the Indian railway system by lines of railway which climb to the Quetta Plateau by the Bolan Pass and through the Chapper Rift, lines which rank amongst the most picturesque and daring in the world. From Quetta the line has been carried by the Khojak tunnel through the Khwaja Amran Range, until it leads out to the Afghan Border at Now Chaman, where it opens on the route to Kandahar. The material is stocked at New Chaman which would enable the line to be carried to Kandahar in sixty days. In view of the same menace the whole of Baluchistan has been brought under British control. Quetta is now one of the great strategical positions of the world, and nothing has been left undone which modern military science can achieve to add to its natural strength. In the opinion of many military authorities it firmly closes the western gate to India, either by way of Kandahar, or the direct route through Seistan.

Further east the Indian railway system has been carried to Jamrud, at the entrance to the Khyber Pass. A first class military road, sometimes double, sometimes treble, threads the Pass to our advanced post at Landi Kotal, and then descends until it meets the Afghan frontier at Tor Khum. Later, a commencement was made with the Loī Shilman Railway, which, starting from Peshawar, was designed to penetrate the Mullagori country and provide an alternative advance to the Khyber for the movement of British troops for the defence of Kabul. For unexplained reasons, this line was suddenly stopped and is now thrust in the air. In this wise the two Powers prepared for the great conflict which was to be fought on the Kandahar-Ghazni-Kabul line.

### Relations with India.

Between the advanced posts on either side stands the Kingdom of Afghanistan. The end of British policy has been to make it strong and friendly. In the first particular it has largely succeeded. When the late Abdurrahman was invited to ascend the throne, as the only means of escape from the tangle of 1879, none realised his great qualities. Previously the Amir of Afghanistan had been the chief of a confederacy of clans. Abdurrahman made himself master in his own kingdom. By means into which it is not well closely to enter, he beat down opposition until none dared lift a hand against him. Aided by a British subsidy of twelve lakhs of rupees a year, increased to eighteen by the Durand Agreement of 1893, he established a strong standing army and set up arsenals under foreign supervision to furnish it with arms and ammunition. Step by step his position was regularised. The Anglo-

Russian Boundary Commission,—which nearly precipitated war over the Pendjoh episode in 1885,—determined the northern boundaries. The Pamirs Agreement delimited the borders amid those snowy heights. The Durand Agreement settled the border on the British side. Finally the McMahon award closed the old feud with Persia over the distribution of the waters of the Helmand in Seistan. It was estimated by competent authorities that about the time of Abdurrahman's death, Afghanistan was in a position to place in the field, in the event of war, one hundred thousand well-armed regular and irregular troops, together with two hundred thousand tribal levies, and to leave fifty thousand regulars and irregulars and a hundred thousand levies to maintain order in Kabul and the provinces. But if Afghanistan were made strong, it was not made friendly. Abdurrahman Khan distrusted British policy up to the day of his death. All that can be said is that he distrusted it less than he distrusted Russia, and if the occasion had arisen for him to make a choice, he would have opposed a Russian advance with all the force at his disposal. He closed his country absolutely against all foreigners, except those who were necessary for the supervision of his arsenals and factories. He refused to accept a British Resident, on the ground that he could not protect him, and British affairs have been entrusted to an Indian agent, who is in a most equivocal position. At the same time he repeatedly pressed for the right to pass by the Government of India and to establish his own representative at the Court of St. James.

### Position To-day.

It used to be one of the commonplaces of Indian discussion that the system which Abdurrahman Khan had set up would perish with him, because none other was capable of maintaining it. Abdurrahman Khan died in 1901. His favourite son, Habibullah, who had been gradually initiated into the administration, peacefully succeeded him, and has since peacefully retained his seat on the throne. He concluded in 1905 the Dane Treaty, by which he accepted the same obligations on the same terms as his father. He visited India in 1907, and apparently both enjoyed and profited by his experiences. Since then the purdah which screens Afghanistan has been lifted so little that there is no definite knowledge of what has passed behind it. It would however be impossible to describe the attitude of the Amir as friendly. It is said that the honours bestowed upon him in India, especially the conferring of a Royal Title, increased the megalomania from which all Afghans suffer. He bitterly resented the conclusion of the Anglo-Russian Agreement, without any prior reference to himself, and has never given his adhesion to it over. His attitude toward the Frontier disturbances of 1907-08 was peculiar. There is no doubt that the Zakkā Khel rising was stirred by refugees in Kabul. Thousands of Afghans, equipped in Afghan territory, participated in the Mohmand campaign. The great lashkar which attacked Landi Kotal was entirely composed of Afghans. The most favourable interpretation placed on his conduct is that during his absence in India, fol-

lowed by a long tour in the northern provinces, the situation in Afghanistan had got out of hand, and the Amir let it take its course until failure occurred, when he stepped in and assumed control of affairs. For the rest, the position of the ruler of Afghanistan is not an enviable one. His brother, Nasrullah Khan, a noted Anglophobe and reactionary, is the Commander-in-Chief of the Army and the head of the orthodox party. The administration of the country is extremely lax. Experiences in Khost indicate that the strength of the central power has been exaggerated. In 1912, the Mangals of Khost revolted against an unpopular governor and besieged him in his own stronghold. There was much talk of the prompt and severe punishment of the rebels, but the troops never reached the valley and the rebels were bought off by the dismissal of the unpopular governor.

### Anglo-Russian Agreement.

Inasmuch as Afghan politics, in their relation to Great Britain, were determined by the Russian menace, they have receded with the conclusion of the Anglo-Russian Agreement. The part of the Anglo-Russian Convention relating to Afghanistan is as follows: I. The British Government disclaims any intention of changing the political position in Afghanistan, and undertakes neither to take measures in Afghanistan, nor to encourage Afghanistan to take measures, threatening Russia. The Russian Government recognises Afghanistan

as outside the Russian sphere of influence, and agrees to act in all political relations with Afghanistan through the British Government, and it also undertakes to send no agents to Afghanistan. II. Great Britain adheres to the provisions of the treaty of Kabul of March 21, 1905, and undertakes not to annex or to occupy, contrary to the said treaty, any part of Afghanistan, or to intervene in the internal administration. The reservation is made that the Amir shall fulfil the engagements contracted by him in the aforementioned treaty. III. Russian and Afghan officials especially appointed for that purpose on the frontier, or in the frontier provinces, may enter into direct relations in order to settle local questions of a non-political character. IV. Russia and Great Britain declare that they recognise the principle of equality of treatment for commerce and agree that all facilities acquired already or in the future for British and Anglo-Indian commerce and merchants shall be equally applied to Russian Commerce and merchants. V. These arrangements are not to come into force until Great Britain has notified to Russia the Amir's assent to them.

The Amir has never given his adhesion to the Agreement; but Great Britain and Russia have agreed to regard the Agreement as if the Amir had accepted it.

On the outbreak of the war His Majesty the Amir declared his complete neutrality, and this policy was pursued during the year in circumstances of great difficulty.

## TIBET.

Recent British policy in Tibet is really another phase in the long-drawn-out duel between Great Britain and Russia in Central Asia. The earliest efforts to establish communication with that country were not, of course, inspired by this apprehension. When in 1774 Warren Hastings despatched Bogle on a mission to the Tashi-Lama of Shigatse,—the spiritual equal, if not superior, of the Dalai Lama of Lhasa—his desire was to establish facilities for trade, to open up friendly relations with a Power which was giving us trouble on the frontier, and gradually to pave the way to a good understanding between the two countries. After Warren Hastings' departure from India the subject slept, and the last Englishman to visit Lhasa, until the Younghusband Expedition of 1904, was the unofficial Manning. In 1885, under the inspiration of Colman Macaulay, of the Bengal Civil Service, a further attempt was made to get into touch with the Tibetans, but it was abandoned in deference to the opposition of the Chinese, whose suzerainty over Tibet was recognised, and to whose views until the war with Japan, British statesmen were inclined to pay excessive deference. But the position on the Tibetan frontier continued to be most unsatisfactory. The Tibetans were aggressive and obstructive, and with a view to putting an end to an intolerable situation, a Convention was negotiated between Great Britain and China in 1890. This laid down the boundary between Sikkim and Tibet, it admitted a British protectorate over Sikkim, and paved the way for arrangements for the conduct of trade across the Sikkim-Tibet

frontier. These supplementary arrangements provided for the opening of a trade mart at Yatung, on the Tibetan side of the frontier, to which British subjects should have the right of free access, and where there should be no restrictions on trade. The agreement proved useless in practice, because the Tibetans refused to recognise it, and despite their established suzerainty, the Chinese Government were unable to secure respect for it.

### Russian Intervention.

This was the position when in 1899 Lord Curzon, Viceroy of India, endeavoured to get into direct touch with the Tibetan authorities. Three letters which he addressed to the Dalai Lama were returned unopened, at a time when the Dalai Lama was in direct intercourse with the Tsar of Russia. His emissary was a Siberian Dorjleff, who had established a remarkable ascendancy in the councils of the Dalai Lama. After a few years' residence at Lhasa Dorjleff went to Russia on a confidential mission in 1899. At the end of 1900 he returned to Russia at the head of a Tibetan mission, of which the head was officially described in Russia as "the senior Tsanite Khomba attached to the Dalai Lama of Tibet." This mission arrived at Odessa in October 1900, and was received in audience by the Tsar at Livadia. Dorjleff returned to Lhasa to report progress, and in 1901 was at St. Petersburg with a Tibetan mission, where as bearers of an autograph letter from the Dalai Lama they were received by the Tsar at Peterhoff. They were escorted home through Central Asia by

a Russian force to which several Intelligence Officers were attached. At the time it was rumoured that Dorjief had, on behalf of the Dalai Lama, concluded a treaty with Russia, which virtually placed Tibet under the protectorate of Russia. This rumour was afterwards officially contradicted by the Russian Government.

### The Expedition of 1904.

In view of these conditions the Government of India, treating the idea of Chinese suzerainty over Tibet as a constitutional fiction, proposed in 1903 to despatch a mission, with an armed escort, to Lhasa to discuss the outstanding questions with the Tibetan authorities on the spot. To this the Home Government could not assent, but agreed, in conjunction with the Chinese Government, to a joint meeting at Khamba Jong, on the Tibetan side of the frontier. Sir Francis Younghusband was the British representative, but after months of delay it was ascertained that the Tibetans had no intention of committing themselves. It was therefore agreed that the mission, with a strong escort, should move to Gyantse. On the way the Tibetans developed marked hostility, and there was fighting at Tuna, and several sharp encounters in and around Gyantse. It was therefore decided that the mission should advance to Lhasa, and on August 3rd, 1904, Lhasa was reached. There Sir Francis Younghusband negotiated a convention by which the Tibetans agreed to respect the Chinese Convention of 1890; to open trade marts at Gyantse, Gartok and Yatung; to pay an indemnity of £500,000 (seventy-five lakhs of rupees); the British to remain in occupation of the Chumbi Valley until this indemnity was paid off at the rate of a lakh of rupees a year. In a separate instrument the Tibetans agreed that the British Trade Agent at Gyantse should have the right to proceed to Lhasa to discuss commercial questions, if necessary.

### Home Government intervenes.

For reasons which were not apparent at the time, but which have since been made clearer, the Home Government were unable to accept the full terms of this agreement. The indemnity was reduced from seventy-five lakhs of rupees to twenty-five lakhs, to be paid off in three years, and the occupation of the Chumbi Valley was reduced to that period. The right to despatch the British Trade Agent to Lhasa was withdrawn. Two years later (June 1906) a Convention was concluded between Great Britain and China regulating the position in Tibet. Under this Convention Great Britain agreed neither to annex Tibetan territory, nor to interfere in the internal administration of Tibet. China undertook not to permit any other foreign State to interfere with the territory or internal administration of Tibet. Great Britain was empowered to lay down telegraph lines to connect the trade stations with India, and it was provided that the provisions of the Convention of 1890, and the Trade Regulations of 1893, remained in force. The Chinese Government paid the indemnity in three years and the Chumbi Valley was evacuated. The only direct result of the Mission was the opening of the three trade marts and the establishment of a British Trade Agent at Gyantse.

### The Anglo-Russian Agreement.

The reason underlying the action of the British Government in modifying, in such material particulars, the Convention of Lhasa was apparent later. The Anglo-Russian Agreement was in process of negotiation, and under that Agreement Great Britain was pledging herself not to annex any portion of Tibetan territory, nor to send a representative to Lhasa. A seventy-five year occupation of the Chumbi Valley would have been indistinguishable from annexation. The portions of the Anglo-Russian Agreement which relate to Tibet are as follows.

Article I.—The two High Contracting Parties engage to respect the territorial integrity of Tibet and to abstain from all interference in its internal administration.

Article II.—In accordance with the admitted principle of the suzerainty of China over Tibet, Great Britain and Russia engage not to enter into negotiations with Tibet, except through the intermediary of the Chinese Government. This engagement does not exclude the direct relations between the British Commercial Agents and the Tibetan authorities, provided for in Article V of the Convention between Great Britain and Tibet of the 7th September, 1904, and confirmed by the Convention between Great Britain and China of the 27th April 1906; nor does it modify the engagements entered into by Great Britain and China in Article I of the said Convention of 1906.

It is clearly understood that Buddhists, subjects of Great Britain or of Russia, may enter into direct relations on strictly religious matters with the Dalai Lama, and the other representatives of Buddhism in Tibet; the Governments of Great Britain and Russia engage, as far as they are concerned, not to allow those relations to infringe the stipulations of the present arrangement.

Article III.—The British and Russian Governments, respectively, engage not to send Representatives to Lhasa.

Article IV.—The two High Contracting Parties engage neither to seek nor to obtain, whether for themselves or for their subjects, any concessions for railways, roads, telegraphs, and mines, or other rights in Tibet.

Article V.—The two Governments agree that no part of the revenues of Tibet, whether in kind or in cash, shall be pledged or assigned to Great Britain or Russia or to any of their subjects.

Annexed to the Agreement was a re-affirmation of the declaration for the evacuation of the Chumbi Valley after the payment of three annual instalments of the indemnity, provided that the trade marts had been effectively opened for three years and that the Tibetans had complied in all respects with the terms of the Treaty.

### Chinese Action.

The sequel to the Anglo-Russian Agreement was dramatic, although it ought not to have been unexpected. On the approach of the

Younghusband Mission the Dalai Lama fled to Urga, the sacred city of the Buddhists in Mongolia. He left the internal government of Tibet in confusion, and one of Sir Francis Younghusband's great difficulties was to find Tibetan officials who would undertake the responsibility of signing the Treaty. Now the suzerainty of China over Tibet had been explicitly reaffirmed. It was asserted that she would be held responsible for the foreign relations of Tibet. In the past this suzerainty having been a "constitutional fiction," it was inevitable that China should take steps to see that she had the power to make her will respected at Lhasa. To this end she proceeded to convert Tibet from a vassal state into a province of China. In 1908 Chao Erh-feng, acting Viceroy in the neighbouring province of Szechuen, was appointed Resident in Tibet. He proceeded gradually to establish his authority, marching through eastern Tibet and treating the people with great severity. Meantime the Dalai Lama, finding his presence at Urga, the seat of another Buddhist Pontiff, irksome, had taken refuge in Si-ning. Thence he proceeded to Peking, where he arrived in 1908, was received by the Court, and despatched to resume his duties at Lhasa. Moving by beleaguered stages, he arrived there at Christmas 1909. But it was soon apparent that the idea of the Dalai Lama and of the Chinese Government had little in common. The Dalai Lama expected to resume the temporal and spiritual despotism which he had exercised prior to 1904. The Chinese intended to deprive him of all temporal power and preserve him as a spiritual pope. The Tibetans had already been exasperated by the pressure of the Chinese soldiery. The report that a strong Chinese force was moving on Lhasa so alarmed the Dalai Lama that he fled from Lhasa, and by the irony of fate sought a refuge in India. He was chased to the frontier by Chinese troops, and took up his abode in Darjeeling, whilst Chinese troops overran Tibet.

#### Later Stages.

The British Government, acting on the representations of the Government of India, made strong protests to China against this action. They pointed out that Great Britain, while disclaiming any desire to interfere with the internal administration of Tibet, could not be indifferent to disturbances in the peace of a country which was a neighbour, on intimate terms with other neighbouring States on our frontier, especially with Nepal, and pressed that an effective Tibetan Government be maintained. The attitude of the Chinese Government was that no more troops had been sent to Tibet than were necessary for the preservation of order, that China had no intention of converting Tibet into a province, but that being responsible for the good conduct of Tibet, she must be in a position to see that her wishes were respected by the Tibetans. Finally, the Chinese remarked that the Dalai Lama was such an impossible person that they had been compelled again to depose him. Here the matter might have rested, but for the revolution in China. That revolution broke out in Szechuen, and one of the first victims was Chao Erh-feng. Cut off from all support from

China, surrounded by a hostile and infuriated populace, the Chinese troops in Tibet were in a hopeless case; they surrendered, and sought escape not through China, but through India, by way of Darjeeling and Calcutta. The Dalai Lama returned to Lhasa, and in 1913, in the House of Lords on July 28, Lord Morley stated the policy of the British Government in relation to these changes. He said the declaration of the President of the Chinese Republic saying that Tibet came within the sphere of Chinese internal administration; and that Tibet was to be regarded as on an equal footing with other provinces of China, was met by a very vigorous protest from the British Government. The Chinese Government subsequently accepted the principle that China is to have no right of active intervention in the internal administration of Tibet, and agreed to the constitution of a conference to discuss the relation of the three countries. This Convention met at Simla when Sir Henry McMahon, Foreign Secretary to the Government of India; Mr. Ivan Chen, representing China; and Mr. Long Chen Shatra, Prime Minister to the Dalai Lama, thrashed out these issues. Whilst no official pronouncement has been made on the subject, it is understood that a Convention was initiated in June which recognised the complete autonomy of Tibet proper, with the right of China to maintain a Resident at Lhasa with a suitable guard. A semi-autonomous zone was to be constituted in Eastern Tibet, in which the Chinese position was to be relatively much stronger. But this Convention, it is understood, has not been ratified by the Chinese Government, owing to the difficulty of defining Outer and Inner Tibet.

#### Political Importance of Tibet.

The political importance of Tibet in relation to India has of necessity been changed by the Anglo-Russian Agreement. So long as that instrument is in force, it tends to decline. But no treaties are everlasting. The question has been admirably summed up by Sir Valentine Chirol ("The Middle Eastern Question"), written before the Agreement was reached. "What it would be impossible to view without some concern," he wrote, "would be the ascendance of a foreign and possibly hostile power at Lhasa, controlling the policy of a great politico-religious organisation whose influence can and does make itself appreciably felt all along the north-eastern borderland of India. Lhasa is the stronghold of Lamaistic Buddhism, a debased form of Buddhism largely overgrown with tautic philosophy—Lhasa is in fact the Rome of Central Asian Buddhism, and the many-storied Po'-a-la on the hill to the west of the city is its Vatican, whence its influence radiates throughout innumerable lamaseries or Buddhist monasteries, not only into Turkestan and Mongolia and Western China, but across the Himalayas into the frontier States of our Indian Empire. Corrupt and degraded as it is, it is still unquestionably a power, and just because it is corrupt and degraded it might lend itself more readily to become for a consideration the tool of Russian ambitions. . . . Tibet as a Russian dependency would, at any rate, no longer be a *quantité négligeable*, and our north-eastern

frontier, naturally formidable as it is, would require to be watched, just as every civilised country has to watch its frontiers, whatever they may be, where they march with a powerful neighbour, and most of all in India, where our frontier is fringed with semi-independent

Native States, over which our authority is conditioned mainly on the hitherto unrivalled prestige of our Imperial power in Asia."

*British Trade Agent, Yatuny.*—D Macdonald.  
*British Trade Agent, Gyantse.*—Major W. T. Campbell.

## THE NORTH-EASTERN FRONTIER.

The position on the northern frontier has been considered as if the British line were contiguous with that of Tibet. This is not so. The real frontier States are Kashmir, Nepal, Sikkim and Bhutan. From Chitral to Gilgit, now the northernmost posts of the Indian Government, to Assam, with the exception of the small wedge between Kashmir and Nepal, where the British district of Kumaon is thrust right up to the confines of Tibet, for a distance of nearly fifteen hundred miles there is a narrow strip of native territory between British India and the true frontier. The first of these frontier States is Kashmir. The characteristics of this State are considered under Native States (*q.v.*): it is almost the only important Native State in India with frontier responsibilities, and it worthily discharges them through the agency of its efficient Imperial Service troops—four regiments of Infantry and two Mountain Batteries, composed mainly of the Rajput Dogras, who make excellent fighting material. One of the most important trade routes with Tibet passes through Kashmir—that through Ladak. Then we come to the long narrow strip of Nepal. This Gurkha State stands in special relations with the British Government. It is for all practical purposes independent, and the British resident at Khatmandu exercises no influence on the internal administration. The governing machine in Nepal is also peculiar. The Maharaja Dhiraj, who comes from the Sesodia Rajput clan, the bluest blood in India, takes no part in the administration. All power vests in the Prime Minister, who occupies a place equivalent to that of the Mayors of the Palace, or the Shoguns of Japan. The present Prime Minister, Sir Chandra Shamsheer, has visited England, and has given conspicuous evidence of his attachment to the British Government. Nepal is the main Indian outpost against Tibet, or against Chinese aggression through Tibet. The friction between the Chinese and the Nepalese used to be frequent, and in the eighteenth century the Chinese marched an army to the confines of Khatmandu—one of the most remarkable military achievements in the history of Asia. Under the firm rule of the present Prime Minister Nepal has been largely free from internal disturbance, and has been raised to a strong bulwark of India. Nepal is the recruiting ground for the Gurkha Infantry, who form such a splendid part of the fighting arm of the Indian Empire. Beyond Nepal are the smaller States of BHUTAN and SIKKIM, whose rulers are Mongolian by extraction and Buddhists by religion. In view of Chinese aggressions in Tibet, the Government of India in 1910 strengthened their relations with Bhutan by increasing their subsidy from fifty thousand to a lakh of rupees a year, and taking a guarantee that Bhutan would be

guided by them in its foreign relations. Afterwards China had officially notified that Great Britain would protect the rights and interests of these States.

### Assam and Burma.

We then come to the Assam border tribes—the Dailas, the Miris, the Abors and the Mishmis. Excepting the Abors none of these tribes have recently given trouble. The murder of Mr. Williamson and Dr. Gregorson by the Minyong Abors in 1911 made necessary an expedition to the Dihang valley of the Abor country on the N. E. frontier. A force of 2,500 and about 400 military police was employed from October 1911 to April 1912 in subduing the tribe. After two or three small actions the murderers were delivered up. The cost of the expedition was Rs 21,00,000. At the same time friendly missions were sent to the Mishmi and Miri countries. Close contact with these forest-clad and leech-infested hills has not encouraged any desire to establish more intimate relations with them. The area occupied by the Nagasares runs northwards from Manipur. The Nagasares are a Tibeto-Burman people, devoted to the practice of head hunting, which is still vigorously prosecuted by the independent tribes. The Chin Hills is a tract of mountainous country to the south of Manipur. The corner of India from the Assam boundary to the northern boundary of the Shan States is for the most part included in the Myitkyina and Bhamo districts of Burma. Over the greater part of this area, a labyrinth of hills in the north, no direct administrative control is at present exercised. It is peopled by the Shans and the Kachins. Civilisation is said to be progressing and steps have been taken to prevent encroachments from the Chinese side. There is a considerable trade with China through Bhamo. On the Eastern frontier of Burma are the Shan States, with an area of fifty thousand square miles and a population of 1,300,000. These States are still administered by the Sawbwas or hereditary chiefs, subject to the guidance of Superintendents and Assistant Superintendents. The Northern Shan Railway to Lashio, opened in 1903, was meant to be a stage in the construction of a direct railway link with China, but this idea has been put aside, for it is seen that there can never be a trade which would justify the heavy expenditure. The Southern Shan States are being developed by railway connection. The five Karenni States lie on the frontier south of the Shan States. South of Karenni the frontier runs between Siam and the Tenasserim Division of Burma. The relations between the Indian Government and the progressive kingdom of Siam are excellent.



Unrest, which had been brewing for some time among the Kachins, came to a head in December 1914 and January 1915, when punitive operations were undertaken. The columns originally consisted of Burma Military Police, but as the disturbance appeared more general and likely to spread, regular troops were ordered

up to Myitkyina. In the Kamaing and Mongaung Jurisdictions, and the adjoining unadministered territory, six columns operated during January and February. The slight opposition encountered was in all cases successfully overcome, the rebel stockades captured, and the implicated villages destroyed.

### \* PERSIAN DEBT TO BRITAIN.

A Parliamentary Paper sets out the outstanding debt of the Persian Government to the British and Indian Governments, as follows:

	£	s.	d.
Portion of Anglo-Indian Loan of 1903-4 (repayable by March, 1928).....	314,281	15	4
Anglo-Indian advance of February, 1912 .....	100,000	0	0
Anglo-Indian advance of Aug. 1912, after defeat of gendarmerie in Fars .....	25,000	0	0
Anglo-Indian advance of Nov. 1912, for use of Governor-General of Fars .....	15,000	0	0

	£	s.	d.
Anglo-Indian advance of April, 1913, for general purposes of administration, including £30,000 for such purposes in Fars and £10,000 for the Bushire Custom House .....	200,000	0	0
Anglo-Indian advance of May, 1913, for gendarmerie purposes in Fars .....	100,000	0	0
Total.....	£754,281	15	4

The 1903-5 loan bears interest at 5 per cent., and all other advances bear interest at 7 per cent.

\* By agreement with Great Britain and Russia these loans have been placed under a moratorium in order to assist the Persian Government financially.

## Railways to India.

The prospect of linking Europe and Asia by a railway running eastwards through Asia Minor has fascinated men's minds for generations. The plans suggested have, owing to the British connection with India, always lain in the direction of lines approaching India. More than 40 years ago a Select Committee of the House of Commons sat for two years to consider the question of a Euphrates Valley railway. The Shah of Persia applied to the British Foreign Office for the investment of British capital in Persian railway construction many years before the end of the nineteenth century. A proposal was put forward in 1895 for a line of 1,000 miles from Cairo and Port Said to Koweit, at the head of the Persian Gulf. While these projects were in the air, German enterprise stepped in and made a small beginning by constructing the Anatolian railway system. Its lines start from Scutari, on the southern shore of the Bosphorus, opposite Constantinople, and serve the extreme western end of Asia Minor. And upon this foundation was based the Turkish concession to Germans to build the Baghdad Railway.

Meanwhile, Russia was pushing her railways from various directions into the Central Asian territory running along the northern frontiers of Persia and Afghanistan to the borders of Chinese Turkestan. The advance of the Russian railroads was regarded with extreme suspicion in England as part of a scheme of adventure against India, and as the Russian lines crept southwards British Indian railways were thrust forward to the Indian north-west frontier. As the two systems approached one another, enthusiasts adumbrated plans for linking them together. M. de Lesseps, the creator of the Suez Canal, made a journey to Bombay to lay one before the Indian Government. He was proposing to start homewards through Afghanistan and Central Asia, so that he might examine a route that way, and *via* Orenburg to Moscow, when the Afghan wars broke out and ended his dream.

The construction of a Trans-Persian railway, connecting India, across Persia, with the Russian lines between the Black Sea and the Caspian Sea has come to the forefront since the conclusion of the Anglo-Russian agreement regarding Persia, and simultaneously with this and the advance of the Baghdad railway old projects for British lines running inland into Persia from the Persian Gulf have been quickened.

The actual position in regard to these various undertakings up to the outbreak of the European war and, so far as can be ascertained, since then, is as follows:—

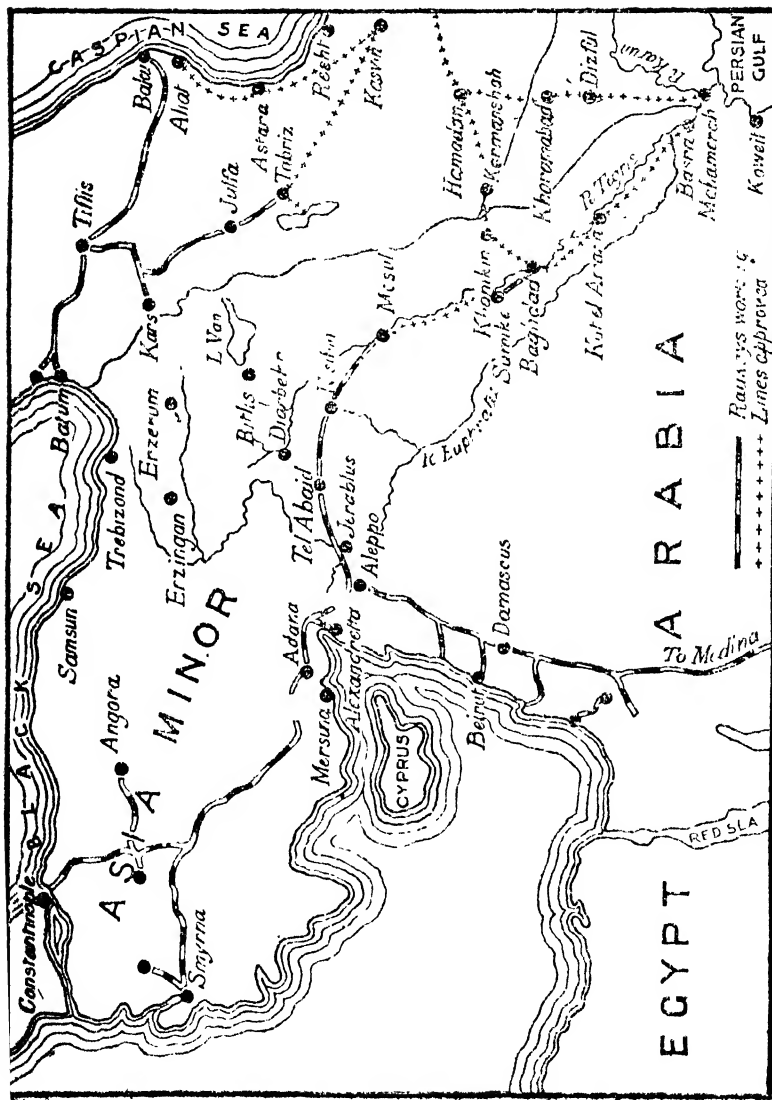
### Baghdad Railway.

The German group holding the Anatolian railway concession was granted, in 1902, a further concession for extending that system from Konia, then its southern terminus, through the Taurus range to the extreme eastern Mediterranean seaboard, and by way of Nisibin, Mosul and Baghdad to Basra. This concession was substituted for a line projected by a more northerly route through the pass of Diarbekr. Russia strongly objected to that route, on the ground that it would bring the line into the

Black Sea basin. When it was abandoned, a Russo-Turkish agreement was passed, reserving to Russia the sole right to construct railways in the northern part of Asia Minor, and Russia has since then prepared a number of projects for that region, branching out from Samsun, on the Black Sea. Russia has also prepared her Caucasian railways for possible extensions in the same region, pushing her lines towards Van and making an agreement with Persia, in February, 1913, for a line to Lake Urumia.

The Anatolian railway company were apparently unable to handle their new concession and initiated fresh negotiations, which resulted in the Baghdad Railway convention of March, 1903. This caused much discussion in England, owing to the apparent intention of the Germans to encroach on the Persian Gulf. Attempts were made by the German group to secure the participation of France and Britain in the undertaking. They were successful in France, the Imperial Ottoman Bank group agreeing to take 30 per cent. of the finance, without, however, the countenance of the French Government. But in England, though Mr. Balfour's Government was favourable, strong objection was taken to the constitution of the Board of Directors, which established German control in perpetuity. It was regarded as a German political move and participation was rejected.

The financial terms, with a Turkish kilometric guarantee, were highly favourable to the company. Thus, the outside cost of construction of the first section, which lies entirely in the plains of Konia, is estimated to have been £225,000, and the company retained a profit of at least 1½ millions sterling on this part of their enterprise. In the second section the Taurus range is being encountered and construction is more difficult and more costly. The railway must for a long time be a heavy burden on Turkish finance. The country through which it passes from the Mediterranean seaboard to the Tigris valley above Baghdad holds out little or no prospect of commercial advantage, and the financial system adopted offers no inducement to the concessionaires to work for increasing earnings. Thus, the Baghdad railway company sublet the working of the line to the Anatolian Railway Company at a rate of £148 per kilometre, as against £180 per kilometre guaranteed by the Turkish Government. The weight of the Turkish obligations in connection with the railway had an important effect upon the discussions, in Paris in the summer of 1913, of the international committee for the examination of questions relating to the Ottoman debt. The committee was appointed in reference to the financial settlement between Turkey and the Balkan States after the war and it became evident that for some Powers, whatever the deserts of the Balkan Allies might be, the Baghdad railway and Turkey's ability to pay the guarantee upon it were the one fixed point to be guarded in the Ottoman Empire. Important negotiations took place between Germany and France, in 1913, to regulate their respective financial positions in regard to the railway, so as to avoid future conflict of poli-



It is reported from S. W. of Adana, that the tunnels through the Taurus Mts. N. W. of Adana, had been completed by November.

tical interests in the regions of the Baghdad lines and the French railway system in Syria.

The Baghdad Railway was during 1913 advanced southward from Konia 182 miles, to Karapınar, on the northern slope of the Taurus. On the southern side of the mountains, the Mersina-Adana line had been incorporated and 16 miles of track constructed from Adana to Dorak, among the southern foothills of the Taurus. Work then proceeded to link up Karapınar and Dorak. The distance between them through the mountains is 56 miles. The limestone mountain gorges involved much tunnel work and it was estimated that the work would occupy three years. During the first two years of the war the tunnelling had not been completed, but the gap in the railway was overcome by the construction of a motor road over the pass, with an efficient motor service upon it. It was reported from Sofia last November that the tunnelling had been completed.

Eastward from Adana, construction advanced throughout 1913, towards the head of the French Syrian lines at Aleppo, and work was begun on a short branch line connecting this new piece with Alexandretta. The branch was opened to traffic early in 1914. The Germans submitted plans to the Turkish Government in 1913 for the construction of a new port at Alexandretta, in accordance with the terms of a supplementary concession sanctioning the branch line. These included the construction of three docks, a feature of considerable interest. Work was begun early in 1913 on a line running north-west from Aleppo to meet that coming from Adana. It has to pierce the Amanus range of hills by a tunnel three miles long, which, it was estimated, would take three years to construct. Here, as on the Taurus range, the break in the line has been overcome by building a road and establishing a motor car service upon it.

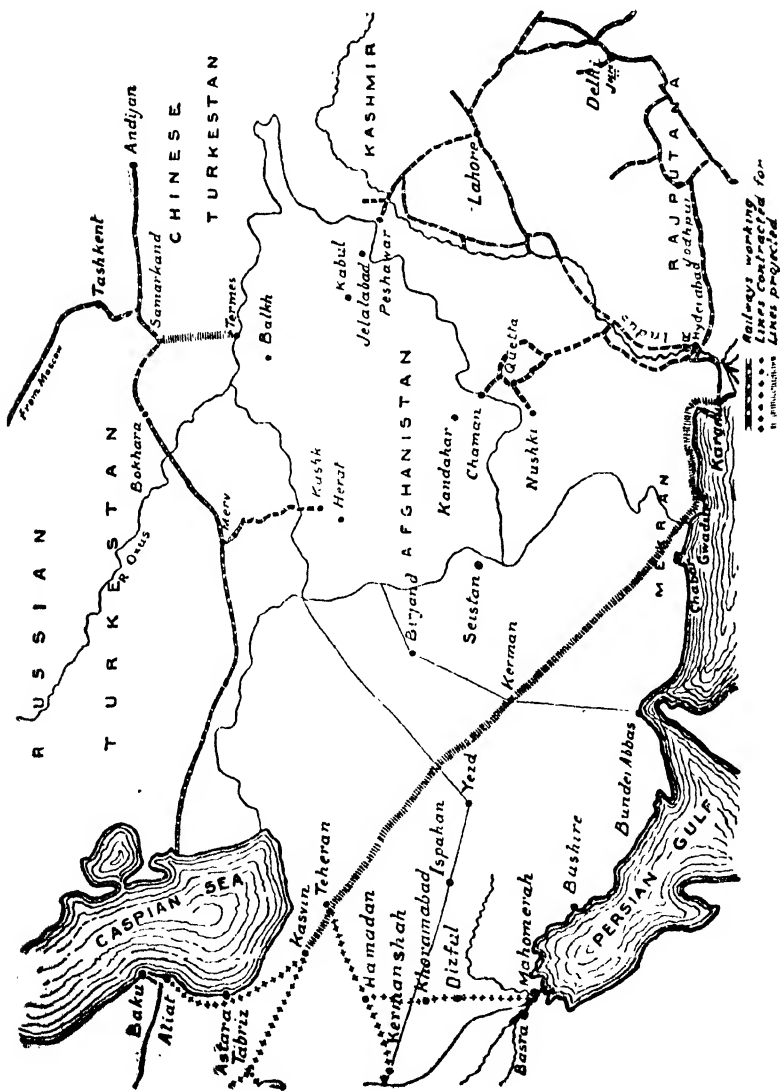
At the time of writing, information as to what progress has been made towards linking up the railway ends through Taurus and Amanus since the outbreak of war is incomplete, but so far from the war having stopped work it has, for military considerations, led to its being pushed forward with increased energy. Work has been most active in both the mountainous sections. One of the biggest tunnels of the whole line, the Dilemedik tunnel, 1,826 metres long, was stated in 1916 to have been pierced and to be approaching completion and this was followed last autumn by the news of the linking up of the entire Taurus section.

Progress has meanwhile been made with important stages of the line running north-east from Aleppo en route to Baghdad. This line was in 1913 open to Jerablus, on the Euphrates and the construction of a large bridge at that spot was immediately undertaken, while motor boat- and a steamer or two were taken in pieces to Jerablus and launched for river traffic to Baghdad. The journey from Beirut to Baghdad was thus reduced to 8½ days, counting two days from Beirut to Jerablus by train, six days by steamer to Feluja, and finally, 10 hours' carriage drive to Baghdad. The river traffic is likely to be interrupted in the dry season. The Jerablus bridge having been completed, the railway was completed and

opened on July 1st, 1914, as far as Tel Abiad, 60 miles east of Jerablus. Earthwork had already been carried much farther. It was reported in the summer of 1915 that 40 miles of line eastward from Tel Abiad had been opened. Trustworthy reports last autumn stated that the line had certainly been completed as far as Nisibin and probably as far as Mosul.

Construction was, before the war, being carried on on the Baghdad-Mosul section, material for the latter being taken up-river from Basra to Baghdad by special barges and tugs. The line from Baghdad to Sumnik about 40 miles north of Baghdad, was handed over for traffic on June 2nd, 1914, and it was reported in 1915 that another 80 miles on this portion of the railway had been completed. Reckoning on the sections completed and open for traffic, a distance of nearly 600 miles had been finished by the summer of 1914 out of a total of 1,020 miles, reckoning from Konia to Baghdad. An official Deutsche Bank report issued in March, 1914, stated that the Balkan wars had caused the German undertaking "to concentrate its Turkish enterprises more than ever upon the Asiatic territories." To this end the Germans handed over their Balkan railway interests to an Austro-Hungarian financial group "on favourable terms," and thus greatly facilitated their special direction of effort in Asia Minor and Mesopotamia. Great efforts were reported to have been made to hasten the construction of the line leading eastward to Baghdad during the past two years.

An agreement was reached in 1914 between Britain and Turkey, with the acquiescence of Germany, regarding the approach to the Persian Gulf. Its central provision was that the railway should not proceed beyond Basra without an agreement with Britain and Britain waived any question of her participation in the Baghdad-Basra section of the line. It was agreed that there should be no differential rates on the railway, and in regard to the latter Britain obtained the right of appointing two directors of the railway, not for purposes of control but to guard British interests. Britain recognised Turkish suzerainty over Koweit and Turkey recognised the independence of the Sheikh of Koweit and the continuance, unimpaired, of the existing relationship between him and the British Government. The Anglo-Turkish Agreement has not yet been published but Sir Edward Grey announced in 1914 that "we get recognition by Turkey of the *status quo* in the Persian Gulf, the *status quo* as we have regarded it for years past." (House of Commons, June 29, 1914). A statement issued in Berlin on June 15, 1914, stated, "The Anglo-German Agreement regarding the Baghdad Railway and Mesopotamia has been finalised in London by Sir Edward Grey and Prince Lichnowsky, the German Ambassador. A complete understanding has been reached on all questions at issue. The agreement will not come into force until after the conclusion of the negotiations with Turkey, as on some material points the assent of the Porte will be necessary. The contents of the Agree-



ment can, therefore, not be divulged at present." The war has altered the whole situation.

Germany also proposed to build a line from Baghdad to Khanikin where a pass through the mountains leads into the West Persian highlands. Russia had agreed to build a railway from Khanikin, via Kermanshah and Hamadan to Teheran, construction to begin within two years of the completion of the extension from Baghdad to Khanikin and then to be completed in 4 years.

### Trans-Persian Line.

A trans-Persian line to join the Russian Caucasian system with the Indian Railways first assumed proportions of practical importance in the late winter of 1911. Both the Russian and the Indian railways are fully developed up to the points which would be the termini of a trans-Persian line and the following details carry us up to the period of the war. The Russian railway system reaches Julfa on the Russo-Persian border between the Black Sea and the Caspian Sea. A line connecting with this runs from Batum, on the east coast of the Black Sea, to Baku on the west coast of the Caspian. Incidentally, article 59 of the Treaty of Berlin provides that Batum shall be "a free port essentially commercial." The Persian Foreign Minister on February 6, 1913, signed a concession to the Russian Julfa-Tabriz and Enzeli-Teheran Road Companies, giving the right to construct a railway from Julfa to Tabriz (93 miles) with an extension to Lake Urumiah and a preferential right to build a railway from Tabriz to Kazvin. Julfa and Tabriz were at that time equipped with a metalled road, on which a motor omnibus service was maintained. The road was the property of the concessionaire company, so that sections of it could conveniently be utilised for railway construction. The work of constructing the line was thus expedited and the line was opened early in 1915. Eight years is fixed as the time limit for the extension of the line from Tabriz to Kazvin, a further distance of 250 miles. The concession runs for a period of seventy-five years. Option is reserved to the Persian Government to purchase the Julfa-Tabriz line after a lapse of 35 years. The Russian Government Department of Railways in June 1913, approved a concession to a Russian Syndicate for the construction of the line from a point on the railway close to Baku to Astara, a point on the Caspian south-western seaboard, where the Russian and Persian territories meet. More than one possible starting point for the trans-Persian Railway is therefore in course of preparation.

On the Indian side, the railway system is fully developed up to Baluchistan, close to the Persian frontier. A broad gauge line running through Quetta to Nushki was constructed with the intention of its development for the benefit of trade which already runs by caravan along the "Nushki trade route" to the Persian province of Selistan. The Russian Government favoured linking up the trans-Persian railway with the Indian railways at this point. But the suspicious saw a strategic reason for this preference. The Indian Government found itself unable to approve

the connection. They insist that the line shall run either from Yezd or Kerman to the seaboard. This condition is absolute. There remains, then, a connection with the Indian North-Western Railway at or near Karachi.

The necessary financial arrangements for the preliminary work in connection with the proposal, which came from Russia, to connect the railways with Russia and India were completed in January, 1912. It was then stated that the Russian Committee were already in possession of a nearly complete survey of more than 300 miles from Astara to Teheran and the length of the line from there to Gwadar on the Perso-Baluch Frontier is some 1,200 miles. Soon after this announcement, Mr. Johns was appointed by the Government of India to survey a railway route between Karachi and Gwadar, and found a good line with a general gradient of 1 in 250, the steepest being 1 in 90. Twelve of the principal Russian Banks were interested in the project and the desired amount of English and French capital was guaranteed, one English banking house having even offered to furnish the whole of the English quota. The French concerns are the Banque de Paris et des Pays Bas, the Credit Lyonnais, the Societe Generale, the Comptoir National, the Banque de l'Union Parisienne and Count d'Arnaux.

Meetings of the international financiers concerned in the scheme were held and a Societe d'Etudes was formed. M. G. Ralndri, formerly a distinguished member of the French diplomatic service, was selected as President, with Sir William Garstin as British Vice-President and M. Homiakoff, ex-President of the Russian Duma, as Russian Vice-President. The Society consists of a council of administration of 24 persons. The Governments of all three countries gave their approval to the enterprise and on the firm representations of the British Foreign Office a formal memorandum was drawn up providing for absolute equality of British, Russian and French control in the undertaking. It was agreed that in the northern half Russian interest should be 60 per cent. French interest 33 1-3 per cent. and British 6 2-3 per cent., and in the southern half Russian interest 6 2-3 per cent., French 33 1-3 per cent., and British 60 per cent. The total interests of the parties in the whole line would thus be equal. The French and Russian proposal was that interests should be equal for the whole line. The above arrangement was made to meet British susceptibilities.

No announcement has yet been made of the settlement of further details in regard to the line. Its general route will presumably be from Astara via Teheran to Kerman or Yezd, and thence to either Bunder Abbas, at the entrance of the Persian Gulf, or Chabar, a point on the Mekran Coast, about 100 miles west of Gwadar. As to the cost, £18,700,000 was the amount first declared by Russian experts as sufficient to cover the cost of construction and provision of rolling-stock for the 1,400 miles of railway in Persian territory. English experts then believed that £15,000,000 would be sufficient. Further investigation has led competent experts on the English side to say that the capital involved must eventually total £30,000,000 at least. The line presents no

great engineering difficulties, but there would be a great variety of gradients throughout its length, the line will rise at several points to some thousands of feet above sea-level, and numerous detours will be necessary both for gradients and to serve local needs.

### Central Asian Lines.

There remains the possibility of linking up the Russian and Indian railway systems by way of Afghanistan. But many strategical objections have been raised to the trans-Persian railway and these considerations are strengthened tenfold in regard to bringing the Russian Central Asian lines nearer Kabul. Russia has in recent years considerably increased her railway facilities in Central Asia. The line from Krasnovodsk on the East Caspian shore now extends, *via* Merv and Bokhara and Samarkand, to Andijan, which is some 350 miles north-west of Kashgar, the important town of Chinese Turkestan. The great network of railways in European Russia is also now directly connected by the Orenburg line with Tashkent, and a connecting line links it up with the southern railway just described. From Merv a line runs south to Kushk, on the Afghan border, within a few miles of Herat. It is reported that Russia intends building another line extending the Orenburg-Tashkent connection to Termez, a point on the Oxus 50 miles or less from Balkh, which, again, is close to the important strategical point, Mazari-Sharif. It is doubtful whether in a race, Russia, starting from Termez, or Britain, starting from the Khyber, could reach Kabul first. Termez, where, it is stated, Russia proposes to throw a bridge across the Oxus, is the highest point at which that river is navigable from the Aral Sea. The suggestion has often seriously been made in recent years that the Russian line from Merv to Herat should be linked to the Indian line which from Quetta proceeds to the Afghan border at Chaman. The distance between the two railroads is about 520 miles.

### Persian Gulf Lines.

Britain's special interests in regard to Persian railways have hitherto primarily been associated with lines running inland from the Persian Gulf, to supersede the old mule routes. Special importance has for many years been attached to schemes for a railway from Mohammerah (at the opening of the Karun Valley, where the Karun River runs into the Shat-el-Arab, just below Basra, near the Turkish border), northwards into the rich highland country of Western Persia. Britain has long established special relations with the Karun Valley and has a large trade there. An agreement was reached between the Persian Government and the representative of a British Syndicate in February, 1913, for the construction of a railway from Mohammerah to Khoramabad, in the interior Persia offered the syndicate a two years' option, during which period the route of the line was to be surveyed. The Persian Government undertook to decide, on the completion of the survey, whether it would build the railway as a State line under contract with the Syndicate, or whether it would

grant the Syndicate a concession for the construction of the line. The Syndicate immediately began preliminary operations. Four English engineers were sent out, and exactly two months after the agreement was announced they proceeded to Dizful, on the route of the line, for the purpose of making preliminary surveys. The Syndicate is composed of six groups, of which four are already connected with Persian commerce, *viz.*, the Anglo-Persian Oil Company, the Imperial Bank, the Euphrates and Tigris Steam Navigation Company (Messrs. Lynch), and the British India Steam Navigation Company. The Syndicate is prepared to undertake much more extensive railway construction in Southern Persia. As Russia will eventually build a line from Teheran to Khamkin, the Khoramabad line will probably be linked with this line, at Hamadan or elsewhere, and Persia will thus have two routes from the Gulf to the north. The latest reports stated that the survey work on the Mohammerah-Khoramabad line was "hung up" owing to the disturbed state of the Luristan tribes around Dizful. The Persian Government agreed to a slight modification of the terms of the concession to meet the situation thus created and Sir E. Grey stated in the House of Commons that "every effort will be made to proceed with survey as soon as the situation in Luristan appears to the responsible authorities to justify such a step.... It is contemplated that the Swedish gendarmery which has done very good work recently in other parts will devote their attention to Luristan with the object of pacifying that part of the country as they have done in some other parts." As a result of repeated Anglo-Russian applications the Swedish Government permitted General Hjalmarsson, the head of the Persian gendarmery, to return to Persia in November, 1914. The war has resulted in great unrest and in treachery on the part of the Swedish gendarmery officers, as a result of German instigation, in Western Persia.

### Period of Transit.

It is commonly said that the Trans-Persian railway would bring India within eight days of London. The possibility was demonstrated by the performance of a party who travelled from London to Persia in 1914 and sent the following details of their journey to the *Times*. The party left London by the 8-35 p.m. train on a Saturday and arrived at Baku at 10-20 p.m. (London time, say, 7-35 p.m.) on the following Thursday, and at Enzeli, on the south-west shore of the Caspian, (reached by steamer from Baku), at 6 a.m. on the following Saturday,—that is, within six and a half days from London. They travelled *via* Folkestone, Flushing, Berlin, Warsaw, Snamenska, Rostoff and Beslan, and were detained at Warsaw some ten hours and at other points a full 12 hours more, thus reducing the actual travelling to 5½ days, which was a "record." There remained, at the end of their journey, only the trans-Persian stage, which it is hoped to cover by the new line, so that an express service from London to Delhi ought to be easily possible within the eight days.

# Foreign Consular Officers in India.

Name.	Appointment.	Port.
<b>Argentine Republic.</b>		
Mr. C. W. Rhodes .. .. .	Vice-Consul .. ..	Calcutta.
<b>Austria-Hungary.</b>		
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<b>Belgium.</b>		
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Mr. James Borie Baxter (Ag.) .. .. .	Do. .. ..	Karachi.
Mr. E. S. Murray .. .. .	Do. .. ..	Aden.
Mr. G. K. Walker .. .. .	Do. .. ..	Madras.
Mr. W. Macdonald .. .. .	Do. .. ..	Rangoon.
Mr. R. A. Scott .. .. .	Do. .. ..	Akyab.
Mr. J. Lince .. .. .	Vice-Consul .. ..	Calcutta.
Mr. R. W. Watson (In charge) .. .. .	Do. .. ..	Bombay.
<b>Bolivia.</b>		
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<b>Brazil.</b>		
Mr. Joakim D. S. Nahapiet .. .. .	Consul .. ..	Calcutta.
Mr. T. A. DeSouza .. .. .	Do. .. ..	Do.
Dr. Edward F. Underwood, M. A., M. D., Ph. D., J. P. .. .. .	Do. .. ..	Bombay.
Mr. J. B. Halliday .. .. .	Vice-Consul .. ..	Rangoon.
Mr. J. F. Brown .. .. .	Commercial Agent .. ..	Do.
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Senhor L. Grommers .. .. .	Do. .. ..	Calcutta.
Mr. A. R. Leishman .. .. .	Do. .. ..	Chittagong.
Mr. C. Kauffeld .. .. .	Do. .. ..	Rangoon.
<b>China.</b>		
Mr. Hsiao Yung Hsi .. .. .	Consul .. ..	Rangoon.
<b>Costa Rica.</b>		
Kumar Shyama Kumar Tagore .. .. .	Consul .. ..	Calcutta.
<b>Cuba.</b>		
Mr. John Zuberbuhler (Acting) on leave .. .. .	Honorary Consul .. ..	Bombay.
Dr. Blasio Paes (In charge) .. .. .	Do. .. ..	Do.
Vacant .. .. .	Do. .. ..	Calcutta.
<b>Denmark.</b>		
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Mr. A. F. Sells .. .. .	Consul .. ..	Bombay.
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Mr. R. T. Menzies .. .. .	Do. .. ..	Madras.
Mr. I. F. Jensen .. .. .	Do. .. ..	Rangoon.
Vacant .. .. .	Vice-Consul .. ..	Karachi.
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<b>France.</b>		
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Mr. E. Nicault .. ..	Chancellor .. ..	Do.
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M. Adolphe Ries (Acting) .. ..	Do. .. ..	Do.
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Vacant .. ..	Do. .. ..	Chittagong.
Do. .. ..	Do. .. ..	Rangoon.
Do. .. ..	Do. .. ..	Akyab.
Do. .. ..	Do. .. ..	Coconada.
Do. .. ..	Do. .. ..	Tellicherry.
Do. .. ..	Do. .. ..	Do.
<b>Germany.</b>		
The American Consuls are in charge of German interests during the War.		
<b>Greece.</b>		
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<b>Gautemala.</b>		
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<b>Italy.</b>		
Marquis F. Medici di Marignano .. ..	Consul-General .. ..	Calcutta.
Cav. G. Cecchi .. ..	Consul .. ..	Aden.
Cav. Dr. G. Gorio (on leave) .. ..	Do. .. ..	Bombay.
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Mr. J. Mickle .. ..	Do. .. ..	Rangoon.
Vacant .. ..	Vice-Consul .. ..	Calcutta.
Signor Alfredo Manzato (in charge of consulate) ..	Do. .. ..	Bombay.
Mr. Gordon Fraser .. ..	Consular Agent .. ..	Madras.
Vacant .. ..	Do. .. ..	Moulmein.
Vacant .. ..	Do. .. ..	Akyab.
Mr. H. J. Guy, R.N.R. .. ..	Do. .. ..	Basseln.
Signor Aldo Viola .. ..	Do. .. ..	Karachi.
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Mr. Y. Shibata .. ..	Do. .. ..	Do.
Mr. Yasukichi Yatabe .. ..	Consul .. ..	Bombay
<b>Liberia.</b>		
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<b>Mexico.</b>		
Mr. R. L. B. Gall .. ..	Consul .. ..	Calcutta.

Name.	Appointment.	Port.
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Mons. J. Barendrecht .. .. .	Consul-General .. .. .	Calcutta.
Mons. L. Grommers .. .. .	Consul .. .. .	Do.
Mons. J. G. Bendien .. .. .	Do. .. .. .	Bombay.
Mr. D. van Wijngaarden .. .. .	Do. .. .. .	Karachi.
Mr. W. Meek .. .. .	Do. .. .. .	Ad n.
Mr. R. A. Scott .. .. .	Do. .. .. .	Akyab.
Monsieur W. Massink .. .. .	Do. .. .. .	Rangoon.
Mr. J. W. Crussha .. .. .	Do. .. .. .	Madras.
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Mr. H. J. Sanders .. .. .	Consul-General .. .. .	Calcutta.
Mr. F. E. Hardcastle .. .. .	Consul .. .. .	Bombay.
Mr. W. Meek .. .. .	Do. .. .. .	Aden.
Sir H. S. Fraser, Kt. .. .. .	Do. .. .. .	Madras.
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Mr. H. A. Rees .. .. .	Do. .. .. .	Rangoon.
Mr. G. J. Smidt .. .. .	Vice-Consul .. .. .	Calcutta.
Mr. S. G. Ritherdon .. .. .	Do. .. .. .	Chittagong.
Mr. S. Lucas .. .. .	Do. .. .. .	Do.
Mr. A. Gardiner .. .. .	Do. .. .. .	Cocanada.
Mr. D. Miller .. .. .	Do. .. .. .	Tuticorin.
Mr. E. G. Moylan .. .. .	Do. .. .. .	Akyab.
Mr. J. Anderson .. .. .	Do. .. .. .	Bassein.
Mr. J. McCracken .. .. .	Do. .. .. .	Do.
Mr. J. J. Shaw .. .. .	Do. .. .. .	Moulmein.
Mr. O. Tuiton .. .. .	Do. .. .. .	Karachi.
<b>Persia.</b>		
Mirza Sir Davood Khan Meftahos-Saltaneh, K.C.M.G. .. .. .	Consul-General .. .. .	Calcutta.
Mirza Ali Akbar Khan, B.A., Barrister-at-Law.	Consul .. .. .	Bombay.
Khan Bahadur Haji Mirza Shujaut Ali Beg ..	Do. .. .. .	Calcutta.
Vacant .. .. .	Do. .. .. .	Madras.
Kumar Shyama Kumar Tagore .. .. .	Vice-Consul-General .. .. .	Calcutta.
Mr. Ayub Khan .. .. .	Vice-Consul .. .. .	Karachi.
Vacant .. .. .	Do. .. .. .	Rangoon.
Do. .. .. .	Do. .. .. .	Moulmein.
<b>Peru.</b>		
Mr. W. Smidt .. .. .	Consul .. .. .	Rangoon.
Mr. J. B. Strain .. .. .	Do. .. .. .	Calcutta.
<b>Portugal.</b>		
Senhor A. Casanova .. .. .	Consul-General .. .. .	Bombay.
Dr. E. M. D'Souza .. .. .	Consul .. .. .	Rangoon.
Mons. C. Jambon .. .. .	Do. .. .. .	Calcutta.
Mr. Shairp .. .. .	Do. .. .. .	Colombo.
Mr. Hormusji Cowasji Dinshaw (on leave)	Do. .. .. .	Aden.
Mr. R. D. Dinshaw (Acting) .. .. .	Do. .. .. .	Do.
Dr. F. da Cunha Pinto .. .. .	Vice-Consul .. .. .	Bombay.
Dr. A. B. da Fouseca .. .. .	Do. .. .. .	Karachi.
Dr. A. M. D'Souza .. .. .	Do. .. .. .	Rangoon.

Name.	Appointment.	Port.
<b>Russia.</b>		
Vacant .. .. .	Consul-General .. .. .	Calcutta.
Mons. M. Ries (on leave) .. .. .	Vice-Consul .. .. .	Aden.
Mr. Adolphe Ries (Acting) .. .. .	Do. .. .. .	Do.
Mons. Ysevolod Ampenow .. .. .	Do. .. .. .	Calcutta.
Mr. S. J. Bodalline .. .. .	Do. .. .. .	Do.
<b>Siam.</b>		
Mr. H. P. W. Macnaghten .. .. .	Consul .. .. .	Bombay.
Vacant .. .. .	Do. .. .. .	Calcutta.
Mr. B. J. B. Stephens .. .. .	Do. .. .. .	Rangoon.
Mr. A. H. Russell .. .. .	Do. .. .. .	Moulmein.
Mr. C. Van-der-Gucht .. .. .	Do. .. .. .	Do.
<b>Spain.</b>		
Mr. Harold Martin (in charge) .. .. .	Consul .. .. .	Bombay.
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Mons. M. Ries (on leave) .. .. .	Do. .. .. .	Aden.
Mr. Adolphe Ries (Acting) .. .. .	Do. .. .. .	Do.
Mr. J. S. Walker (Acting) .. .. .	Do. .. .. .	Rangoon.
<b>Sweden.</b>		
Mr. W. L. Wanklyn .. .. .	Consul-General .. .. .	Calcutta.
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Mr. L. Volkart (on leave) .. .. .	Do. .. .. .	Bombay.
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Mr. E. T. Hicks .. .. .	Do. .. .. .	Rangoon.
Mr. T. H. Wheeler .. .. .	Vice-Consul .. .. .	Calcutta.
Vacant .. .. .	Do. .. .. .	Moulmein.
<b>Switzerland.</b>		
Mr. Charles Ringger .. .. .	Consul .. .. .	Bombay.
<b>Turkey.</b>		
The American Consuls are in charge of Turkish interests during the war.		
<b>United States of America.</b>		
James A. Smith .. .. .	Consul-General .. .. .	Calcutta.
J. P. Doughten .. .. .	Vice-Consul .. .. .	Do.
Samuel C. Beat .. .. .	Consul .. .. .	Rangoon.
H. B. Osborn .. .. .	Vice-Consul .. .. .	Do.
Lucien Memminger .. .. .	Consul .. .. .	Madras.
Frank C. Rich .. .. .	Vice-Consul .. .. .	Do.
Walter A. Leonard .. .. .	Consul .. .. .	Colombo.
John A. Nye .. .. .	Vice-Consul .. .. .	Do.
Selby S. Coleman (in charge) .. .. .	Consul .. .. .	Bombay.
Selby S. Coleman .. .. .	Vice-Consul .. .. .	Do.
James Oliver Laing .. .. .	Consul .. .. .	Karachi.
E. L. Rogers .. .. .	Vice-Consul .. .. .	Do.
Vacant .. .. .	Consul .. .. .	Aden.
Arthur G. Watson .. .. .	Vice-Consul .. .. .	Do.
H. W. Timewell .. .. .	Consular Agent .. .. .	Bussrah, Persian Gulf.
.....	Do. .. .. .	Chittagong.
<b>Uruguay.</b>		
Mons. C. Zambon .. .. .	Consul .. .. .	Calcutta.

## The Army.

The great sepoy army of India originated in the small establishments of guards, known as peons, enrolled for the protection of the factories of the East India Company; but sepoys were first enlisted and disciplined by the French, who appeared in India in 1665. Before this, detachments of soldiers were sent from England to Bombay, and as early as 1625 the first fortified position was occupied by the East India Company at Armagon, near Masulipatam. Madras was acquired in 1640, but in 1654 the garrison of Fort St. George consisted of only ten men. In 1661 Bombay was occupied by 400 soldiers, four years before the French appeared in India. In 1668 the garrison of Bombay consisted of 285 men, of whom only 93 were English, the remainder being French, Portuguese and natives.

While the origin of the regular sepoy army is usually dated from 1748, when Stringer Lawrence, "the father of the Indian Army," enrolled an Indian force in Madras, it is interesting to note that there was a considerable military establishment in Bombay prior to that date. In 1741 this establishment, which was considered as one regiment, consisted of a captain, nine lieutenants, fifteen ensigns, a surgeon, two sergeant-majors, 82 sergeants, 82 corporals, 26 drummers, and 319 European privates, together with 31 "masters" (probably Eurasians) and 900 topasses—presumably Goanese. These were distributed in seven companies, their total monthly pay being 10,314 rupees. There was in addition a kind of native militia, composed of 700 sepoys including native officers. These were maintained at a monthly cost of 312 rupees. They were not equipped or dressed in a uniform manner, but supplied their own weapons—swords and shields, bows and arrows, pikes, lances or matchlocks. After the declaration of war with France in 1744, the forces at Bombay were considerably increased, and an artillery company was raised. Already in 1740 the French at Pondicherry had raised a large force of Musalman soldiers, armed and equipped in the European fashion; and the fall of Madras, which the French captured in 1746, induced the English East India Company to begin the formation of a military establishment of like nature. In January 1748 Major Stringer Lawrence landed at Fort St. David to command the forces of the Company. The English foothold in India was then precarious. The French under Dupleix were contemplating further attacks; and it became necessary for the English Company to form a larger military establishment. The new commandant at once set about the organisation and discipline of his small force. The garrison was organised in seven companies; and the peons, or factory guards, were also formed into companies. This was the beginning of the regular Indian Army, of which Lawrence eventually became Commander-in-Chief. In Madras the European companies developed into the 1st Madras Fusiliers; similar companies in Bombay and Bengal became the 1st Bombay and 1st Bengal Fusiliers. The native infantry was similarly developed and organised by Lawrence and Clive, who was his contemporary, and military adventures—both Musalman and Hindu—

readily took service under the East India Company. By degrees Royal Regiments were sent to India, the first being the 89th Foot which arrived in 1754.

### Struggle with the French.

From this time for a century or more the Army of India was engaged in constant war. After a prolonged struggle with the French, whom Dupleix had by 1750 raised to the position of the leading power in India, the efforts of Stringer Lawrence, Clive and Eyre Coote completed the downfall of their rivals, and the power of England was established by the battle of Plassey in Bengal and on the field of Wandewash in Southern India. In 1761 the final overthrow of the French was completed, and the territories of that enterprising people were reduced to a few settlements on the coast, the principal of which, Pondicherry, was captured in 1795. But while the Army of India had accomplished this much, they had now to contend with the great native powers, both Hindu and Mahomedan. A number of independent states had arisen on the decline of the Mughal Empire, some ruled by the satraps of the Emperor of Delhi and others by the Mahratta princes who had succeeded to and extended the conquests of Sivaji; while in Mysore Hyder Ali, a Mussalman adventurer, had established himself in the place of the Hindu Raja. A great and prolonged struggle took place with the ruler of Mysore, in which the forces of the Crown and the Company's Army bore a distinguished part. This struggle extended over nearly twenty years, and terminated only with the death of Hyder's son and successor Tipu when his capital of Seringapatam was taken by assault in 1799.

### Presidency Armies.

The extension of British territory had necessitated a corresponding augmentation in the strength of the armies of Bengal, Madras and Bombay, which were entirely separate organisations, as rendered requisite by the great distances and independent territories by which they were separated. But Bengal and Bombay troops had taken part in the wars in Southern India, although the brunt of the fighting had fallen on the Madras Army. These armies had grown both in strength and efficiency. In 1787 the Governor-General, Lord Cornwallis, wrote to the Duke of York—"A brigade of our sepoys would make anybody emperor of Hindustan. The appearance of the native troops gave me the greatest satisfaction; some of the battalions were perfectly well-trained, and there was a spirit of emulation among the officers, and an attention in the men, which leaves me but little room to doubt that they will soon be brought to a great pitch of discipline."

### Reorganisation of 1796.

In 1796, when the native armies were reorganised, the European troops were about 13,000 strong; the native troops numbered some 57,000, the infantry being generally formed into regiments of two battalions each. In Bengal native infantry regiments were formed by linking existing battalions. The establishment of each two-battalion regiment was 1 colonel commanding, 2 lieutenant-colonels, 2 majors, 8 captains

22 Lieutenants, 10 ensigns, 2 European non-commissioned officers, 40 native officers, 200 native non-commissioned officers, 40 drummers and fifers, 1,600 sepoys. Each battalion had two grenadier and eight battalion companies. Promotion and furlough rules for the officers were promulgated and interior economy was improved. At the same time the Madras and Bombay armies were reorganised. The Madras cavalry was formed into four regiments, having twelve British officers each, the artillery into two battalions of five companies each and fifteen companies of lascars. The native infantry was organised in eleven two-battalion regiments, rather stronger than those of the Bengal establishment. There were also two battalions of European infantry. The Bombay Army was organised on similar lines, with an establishment of six two-battalion regiments and a Marine Battalion; six companies of European artillery were formed in 1798.

#### Policy of Wellesley.

Besides the wars that have been referred to, the East India Company had been engaged in minor operations, particularly against the growing power of the Marhattas, which menaced the stability of the British in India. In 1798 the Marquis Wellesley arrived as Governor-General firmly imbued with the necessity of reducing the power and influence of the French, which had again arisen through the military adventurers who had established themselves in the service of various native powers. There was a French party at Seringapatam, and the ruler of Mysore was in correspondence with Napoleon Bonaparte in Egypt. At Hyderabad the French adventurer Raymond dominated the State army, having under his command a disciplined force of 14,000 men who carried the colours of the French Republic and wore the Cap of Liberty engraved upon their buttons. In the Marhatta States, and especially in Sindia's service, adventurers of the same enterprising nation had disciplined large forces of infantry and artillery; and the blind Mughal Emperor at Delhi was held in the power of Perron, Sindia's French General. One of the first acts of the new Governor-General was to disarm the French party at Hyderabad, a measure carried out by Captain (afterwards Sir John) Malcolm. The French officers in the Nizam's service were deported to their own country, and a treaty of alliance was concluded under the terms of which a Contingent of Hyderabad Troops was supplied for service in the campaign of Seringapatam. Troops of all three presidencies took part in the campaign which terminated with the capture of Seringapatam and the death of Tipu on the 4th May 1799. It was in this campaign that Colonel Arthur Wellesley, afterwards Duke of Wellington, came into prominent notice. It was now necessary to direct attention to affairs in the Marhatta States, which were encroaching on the territories of our ally the Nizam, and had a dangerous ascendancy throughout India. An opportunity occurred in supporting the Peshwa, who had been expelled from Poona by Holkar.

#### The Marhattas.

The Marhattas, originally mere predatory hordes, had become an organised nation under the rule of Sivaji. After his death

the Government which he had inaugurated passed from the feeble hands of his successors, the Rajas of Satara, into those of the astute Brahmin Ministers, the Peshwas, who had their seat at Poona. Other Marhatta princes, descended from officers of State—Sindia, Holkar, the Galkwar and the Raja of Berar—held sway over a great part of India, and were attempting to extend their dominions and consolidate their influence from the Ganges to the Godavery. The Marhattas, famous as irregular predatory hordes in times gone by, had never been remarkable for courage, the place of which was supplied by their natural astuteness and capacity for organisation. The genius of the nation lay more in the direction of diplomacy and intrigue, and a false glamour appears to surround their name as warriors, to which history has lent an undeserved prestige. Their success must in part be prescribed to their intellectual acumen and subtlety, and in part to the effete condition of those with whom they had to contend. The edifice of their nationality was built on the ashes of the declining Mughal Empire. But even since the days when their military renown had rested on some solid foundation they had rapidly declined, and the phantom of their fame was dissipated the moment they came into collision with European armies. Their artillery and infantry, composed of Jats, Rajputs, Arabs and other mercenaries, fought with desperate valour, but the far-famed Marhatta horse disappeared from the field at the beginning of every action. General Lake in the north of India defeated the forces of Sindia in a succession of battles at Aligarh, at Agra, at Delhi and Laswari; while in the south General Arthur Wellesley captured Ahmednagar and Gawilgarh, and gained complete victories over the combined forces of Sindia and the Raja of Berar at Assaye and Argaum. In these campaigns a considerable British force and a large portion of the Bengal and Madras armies were employed; they acquitted themselves with their customary valour, and gained some of the most notable victories recorded in English history. During the progress of these wars the Army of India was considerably augmented, and we find that on reduction to peace establishment in 1805 there were some 25,000 British and 130,000 native troops in India.

#### Mutiny at Vellore.

The Indian Army has been from time to time subject to incidents of mutiny which were precursors of the great cataclysm of 1857. In the fort of Vellore in 1806 were confined the sons of Tipu Sultan, these descendants of the most fanatical enemy of the English in India being permitted to maintain a large body of adherents and an almost regal state. Naturally they intrigued. The native soldiers of the Company had grievances. The military authorities had issued a new pattern of turban, which owing to its resemblance to the head-dress worn by half-caste drummers, gave rise to a rumour that their conversion to Christianity was intended. Other inconsiderate orders, prejudicial to the religion and sentiments of both Hindus and Mahomedans, caused the smouldering discontent already existing to break out into open

mutiny. There were many signs and portents typical also of the greater rebellion. The officers had become estranged from their men and lived too much apart from them. The native troops suddenly broke out and killed the majority of the European officers and soldiers, their wives and children, quartered in the fort, while the striped flag of the Sultan of Mysore was raised on the ramparts. But if the parallel so far is close, the method of dealing with the outbreak of 1804 differed widely from the weakness displayed at Meerut in 1857. There was happily at the neighbouring station of Arcot a soldier of energy, decision, and courage both moral and physical. Colonel Gillespie with the 19th Light Dragoons and galloper guns came down upon the mutineers like a hurricane, blew in the gates of the fort, destroyed most of the sepoys, and in the course of a few hours suppressed the rebellion. This retribution struck terror into the hearts of other would-be mutineers and disaffection, which was rife throughout the Madras Army, did not elsewhere find active expression.

#### Overseas Expedition.

Almost as dangerous was the mutinous discontent excited among the British officers by the ill-advised measures of Sir George Barlow, unfortunately acting temporarily as Governor-General in 1809, which was with difficulty quelled by the tact of wiser and more considerate men. It was not only within the confines of India that the Army distinguished itself during the period under review. Expeditions were made beyond seas. Bourbon was taken from the French; Ceylon, Malacca, and the Spice Islands were wrested from the Dutch; and Java was conquered in 1811 by a force largely composed of Bengal troops which had volunteered for this service. In 1814 took place the Nepal War, in which the brave Gillespie who had so distinguished himself at Vellore and in Java, was killed when leading the assault on a fort near Dehra Dun. This war is chiefly of interest from its having introduced us to the Gurkhas, inhabitants of Nepal, who form so large and efficient a portion of our Indian Army.

#### Second Mahratta War.

In 1817 hostilities again broke out with the Mahrattas. The primary cause of the war were the Pindaris, a military system of bandits of all native races and creeds who, formed mostly from the military adventurers who had been employed by native potentates, had established themselves in strongholds on the banks of the Nerbada river, from whence they issued to plunder the country from the end to end. These people had become so formidable that a large army had to be assembled for their destruction, for they viewed with dismay and opposed with force the establishment of effective power in the land where they had so long carried on with impunity their lawless modes of life. To cope with this growing evil, armies were to close in from every direction on the fastnesses of the Pindaris. At the same time a watch had to be kept on the Mahratta States, whose rulers, encouraged by the feeble policy that had followed when the strong hand of the Marquis Wellesley was removed, were pre-

pared to take up arms once more. Practically the whole of the Army took the field, and all India was turned into a vast camp. The experiences of 1817 differed in no wise from those of 1803, except that resistance was less stubborn as the brigades of the European military adventurers no longer existed in the Mahratta armies. The Chiefs of Poona, Nagpore, Indore and Gwalior rose in succession. At the battle of Kirkee, where the tramp of the myriad Mahratta horse shook the very earth, they were beaten off by one-tenth of their numbers after a feeble attempt to charge a native regiment. At Koregaum where the detachment under Captain Staunton offered so gallant a resistance to the attacks of a vastly superior force, the Arabs alone fought on the side of the Mahrattas, 20,000 of whom stood idle on the plain. At Sitabaldi a few regiments of Madras native infantry beat off the attacks of the army of the Raja of Nagpore; and victory was assured by the charge of a troop of Bengal cavalry. At the battle of Mahidpur the hosts of Holkar melted like snow from the face of the desert before the determined onslaught of a small army of British and native troops. This was the last war in Southern India. The tide of war rolled to the north, never to return. In the Punjab, to the borders of which our frontier was now extended, the Army was to meet in the great military community of the Sikhs, a braver and more virile foe.

#### Reorganisation in 1824.

In 1824 there was another outbreak of mutiny, this time at Barrackpore in a regiment that was unwisely dealt with when about to proceed to the Burmese War. In that year the armies were reorganised, the double-battalion regiments being separated, and the battalions numbered according to the dates when they were raised. The Bengal Army was organised in three brigades of horse artillery, five battalions of foot artillery, two regiments of European and 68 of native infantry, 5 regiments of irregular and 8 of regular cavalry. The Madras and Bombay armies were constituted on similar lines, though of lesser strength. There were also various local forces, such as the Hyderabad Contingent, paid for by the Nizam, consisting of horse, foot and artillery. The irregular cavalry were all sildars, that is the troopers furnished their own horse and equipment, as do the greater part of the native cavalry of to-day. The irregular and local corps had each only two or three European Officers.

#### First Afghan War.

In 1839 the occupation of Afghanistan was undertaken, Kabul was occupied, and a large Army stationed in this country beyond the Indus. There followed the disasters of Kabul; the murder of British envoys, and the retreat in which a whole army perished. This disaster was in some measure retrieved by subsequent operations, but it had far-reaching effects on the morale of the Army and on British prestige.

#### The Sikhs.

The people of the Punjab had witnessed from afar the disaster of the retreat from Kabul. It is true that they had seen also the advance of the victorious army, and the triumph of its return which was celebrated

with barbaric pagantry at Peshawar; but the British army had lost the prestige of invincibility which it had gained during a hundred years of victory throughout peninsular India. It is convenient here to give some account of the Sikhs in whom our army met a more formidable enemy than they had hitherto encountered, who have since supplied many of the best soldiers in its ranks, and who less than nine years later served with valour and fidelity beneath our colours in the great struggle of the sepoy war. In the early part of the sixteenth century Baba Nanak, a peasant of a village near Lahore, founded the religious sect which was to play such an important part in the history of India. The religion he preached was pure monotheism and in no way militant in its original form. The new faith, founded on the Unity of God and the religious equality of man, gradually made great headway, the philanthropy and tolerance of its tenets appealing to the hearts of men. The Gurus who succeeded Nanak were active in their teaching; they founded and built the Golden Temple at Amritsar; and the sect began to assume a political significance. This brought them into conflict with the Mughal Government, and Sikhism was subjected to that persecution which was alone necessary to transform it into a militant political force. Har Govind, the Sixth Guru, became a military as well as a spiritual leader, and on his death in 1645 left the Sikhs a strong and militant power.

After two hundred years the Sikh faith became established as a guiding principle to work its way in the world. Nanak disengaged his little society of worshippers from Hindu idolatory and Mahomedan faith; Amar Das preserved the community from declining into a sect of ascetics; Arjan gave his increasing followers a written rule of conduct and a civil organisation; Har Govind added the use of arms and a military system; Govind Singh bestowed upon them a distinct political existence, and inspired them with the desire of being socially free and naturally independent. Sikhism arose where fallen and corrupt Brahminical doctrines were most strongly acted on by the vital and spreading Mahomedan belief. As in the case of other sects whose vicissitudes are recorded in the history of the world, religious persecution gave to Sikhism that vivifying influence which was the necessary stimulus to permanence and progress. With varying fortunes the power of the Sikhs was consolidated, and by 1785 they were predominant from the frontiers of Oudh to the Indus. Their prestige is illustrated in the story of the traveller Foster, who describes the alarm caused to a petty Chief and his people by the appearance of two Sikh horsemen under the walls of their fort. The great Chief Ranjit Singh, the "Lion of the Punjab," established his ascendancy throughout that province, and with the aid of European military adventurers such as Ventura and Allard organised a powerful regular army. Ranjit Singh had the wisdom to keep on friendly terms with the English, but his death was the signal for internal dissensions which in course of time rendered the Army the principal power in the state, and brought them into conflict with their English neighbours.

### Sikh Wars.

A large portion of the Bengal Army under Sir Hugh Gough took part in the first Sikh War in 1845-6, in the opening battle of which, at Mudki and Ferozeshahr, the native troops did not greatly distinguish themselves; although they retrieved their reputation in subsequent actions when the Sikhs were defeated at Allwal and Sobraon. But the Bengal Army had for some time been undergoing that deterioration of discipline which culminated a dozen years later in the mutiny. They were no longer the soldiers of Lake and Hastings; the heroes of Laswari, of Seringapatam, and of expeditions overseas. In the snows and deserts of Afghanistan and amid the bloody scenes of the Khurd Kabul Pass and Jagdalak they had lost much of their ardour and prestige, while they had witnessed the defeat and slaughter of their hitherto invincible English comrades. They fought well on occasion, stimulated by the presence and example of English regiments; but their training and discipline left much to be desired. The second Sikh War followed a few years later, when, after the indecisive battle of Chillianwala, the Sikhs were finally vanquished at Gujarat. The other campaigns belonging to this period were the conquest of Sind by Sir Charles Napier and the Second Burmese War. On the eve of the Mutiny there were in the Bengal Army 21,000 British and 137,000 native troops; in the Madras Army 8,000 British and 49,000 native troops; and in Bombay 9,000 British and 45,000 native troops. The conquest of the Punjab extended our frontier to the country inhabited by those turbulent tribes which have given so much trouble by their raids and forays, while they have supplied many soldiers to our army. To keep order on this north-western limit of the Empire the Punjab Frontier Force was established, and was constantly engaged in small expeditions which, while they generally involved but little bloodshed, kept the Force fully employed for many years, and involved much arduous work in the pursuit of an elusive enemy.

### The Indian Mutiny.

The history of the Indian Army in general and of the Bengal Army in particular is so closely bound up with the great Mutiny of 1857 that it is necessary to enter into some account of the causes which brought about that catastrophe, and to sketch in outline its chief events. In 1856 Lord Dalhousie resigned the Viceroyalty of India after a term of office marked by strenuous activity and by an extensive policy of annexation. From Oudh a dissolute and incompetent king was removed and his territories were annexed to the British dominions, an act which could not but have a disturbing effect in a country where the natural and hereditary rulers of the people were regarded with the greatest veneration. The territory of Jhansi was also annexed, the Government refusing to allow the Rani to adopt an heir to succeed her deceased husband; and the Nana of Bithur, adopted son of the last Peshwa Baji Rao, was refused a continuance of his adoptive father's pension. These two latter, the Rani of Jhansi and Nana Sahib, became the bitterest and most cruel of our enemies. The

annexation of Oudh was a severe shock to the susceptibilities of the feudal nobles of that province, from which, it must be remembered a large portion of the Bengal Army was recruited. There were thus political causes of disaffection in India apart from the constant presence of racial difference, fostered by political agitators and a seditious press. There were Princes and States ripe for rebellion; while on the throne of the Mughals at Delhi there sat the shadow of a monarch whom tradition and the greatness of a name caused to be venerated by Mussalmans throughout India. And in the Bengal Army political agitators found a fertile soil for planting the seed of corruption.

The infantry of that army had in its ranks a great majority of Oudh sepoys; while men of the same race formed the bulk of forces such as the Gwalior Contingent, maintained by Native States under the terms of treaties with the British Government. A small percentage of Mahomedans of Hindustan was also to be found in the Bengal Native Infantry, while they supplied the greater part of the Cavalry of that Presidency. It will thus be understood that in both armies there was a dangerous preponderance of one class, facilitating and extending combination on the part of the disaffected. It was different with the armies of the other Presidencies, which were entirely separate from the Bengal Army, and under their own Commanders-in-Chief, and where men of every caste and creed were mingled in the ranks, a system which obviated the likelihood of combination among men ever prone to be suspicious of one another. There were in the Madras Army family ties to keep the men true to their salt. In that Presidency the sepoy had in almost every instance a large number of relatives living with him. He was not likely to abandon these relations to their fate, and mutiny against the Government he served. The Presidential system, in fact, offered an effective safe-guard in the "water-tight compartments" that prevented those animosities from intermingling. There was not only no sympathy but some antagonism between the different armies; and on one occasion when regiments of the northern and southern Presidencies were serving together, an order had to be issued that the Madras sepoys were not to irritate their brethren by calling them "Bengalis" which was regarded as an opprobrious term, applicable properly to a despised and unwelcome race which has never furnished any soldiers. While the susceptibilities of the Oudh sepoy had been hurt by the annexation of his country, the Muhammdans still held in veneration the puppet who occupied the throne of the great Mughals and cherished the recollection of former glory and power. They had in addition the influence of a fanatical religion to incite them to a holy war against the Christians. Their combination with the Hindus is, however, somewhat remarkable, and the causes which brought these antagonistic peoples into alliance must be sought for elsewhere than in political influences. That there were leaders such as the Nana, the Rani of Jhansi and the Maulvi of Fyzabad who made use of the native army for purposes of rebellion has already been indicated. But the army would not mutiny merely

at the instigation of a few political intriguers and agitators. The seeds of disaffection had long been growing in the Bengal Army. The disasters of the Afghan War had taught the sepoy that his European comrade was not invincible. The proportion of Native to British soldiers in India was far too great. The Indian Empire in those days rested too largely on mercenary forces. There were in the country only some 38,000 British soldiers, while the native troops numbered 200,000 men, exclusive of the numerous levies of independent or semi-independent princes. A great establishment of native artillery had grown up. While the Bengal sepoy had deteriorated in morale, he had cause for discontent. He had been alternatively pampered and abused. The grant of extra allowances on all occasions for field service had in the first place excited his cupidity; their withdrawal had aroused his discontent. He feared that attempts were being made to destroy his caste and subvert his religion, the points on which he was most sensitive. There was too much centralisation of power in the hands of the military authorities at Army Headquarters. The proselytising spirit was abroad, and some amiable but fanatical officers preached their religion about the country. The crucial question of the greased cartridges brought matters to a head. With a great deal of reason the sepoys complained of the new cartridge, the paper of which was greased with animal fat, said to be that of swine and oxen, the former abhorrent to Mussalmans, the latter sacrilegious to Hindus. The mysterious unleavened cakes were circulated, and while their significance was realised by some, it was ignored by those in authority.

### Course of the Rising.

The introduction of the new cartridge for the Enfield Rifle in January 1857 caused widespread alarm among the native ranks of the army. At Berhampore the 19th Bengal Infantry mutinied, and was marched to Barrackpore, and there disbanded on the 31st March. On the 29th March, sepoy Mangal Pande, of the 34th Bengal Infantry at Barrackpore, attacked and wounded the Adjutant and European sergeant-major of his regiment. At Meerut on the 24th April eighty-five men of the 3rd Bengal Cavalry refused to take the new cartridge. They were tried and sentenced to ten years' imprisonment, their sentence being announced and fetters riveted on at parade on the 9th May. This degrading aggravation of punishment was the spark that fired the mutiny. Next evening the troops in Meerut rose, and, aided by the bazaar rabble, killed every European they met, released their comrades from the gaol, and went off to Delhi. It is unfortunate that there was at Meerut no senior officer capable of dealing with the crisis. There were in garrison two batteries of field artillery, as well as one of the finest cavalry regiments in the British Army, the Carabineers, and a battalion of Rifles. But fatal inaction paralysed the Europeans, and the mutinous soldiery marched unmolested to Delhi. Here the troops soon followed suit; murdered some of their officers, while others escaped, and a number of Europeans of all ages and both sexes was massacred in the



place and in the streets. An army was at once organised for the recovery of Delhi, while forces were collected in the Punjab, which remained loyal under the strong hand of John Lawrence. The British columns having defeated the rebels who opposed them at Badli-ki-Sarai, arrived before Delhi on the 8th June, and began the long siege which terminated with the capture of the city in the middle of September, when the heroic Nicholson fell in the hour of victory. Meanwhile the mutiny had spread to other corps of the Bengal Army. The native troops at Cawnpore rose on the 4th June, massacred the Europeans of the Garrison who surrendered on the 27th, while the women and children were butchered on the 15th July, the day before Havdlock's relieving column defeated the Nana and entered Cawnpore. There was mutiny at many other places during this period not only at stations north of the Jumna, but in Central India, and in Rajputana, where the disaffected troops of the Gwalior Contingent were stationed at Gwalior, Neemuch, Nasirabad and other cantonments. At Jhansi a general massacre took place, when the Europeans unwisely surrendered to their pitiless foe. Throughout Bundelkhand and the Central Provinces the wilder spirits of the country rose and banded with the mutineers. With few exceptions the Bombay Army remained loyal, as did the Madras Army and the Hyderabad Contingent, although there were some isolated out-breaks at Hyderabad and at Sholapur. But generally speaking the rebellion did not spread south of the Tapti River. On the 30th September the troops at Lucknow rose, and there began the long and glorious defence of the Residency by the beleaguered garrison under Sir Henry Lawrence; Lucknow was relieved by Havdlock and Outram on the 27th September, but the rebel hold on the defenders was not relinquished until Sir Colin Campbell advanced and drove off the mutineers with terrible slaughter two months later. Having relieved Lucknow, Sir Colin Campbell marched to Cawnpore, where General Windham had been driven into the intrenchments, and was with difficulty holding his own against the Gwalior Contingent under Tantia Topi. On the 6th December 1857, Cawnpore was relieved, and the rebels retired on Kalpi. It was not until 1858 that the small army under Sir Hugh Rose, the most skilful and enterprising leader of those times, marched through Central India, relieving many beleaguered places, fighting many pitched battles, and avenging the massacre of Jhansi in the storm and capture of that place, at the capture of Kalpi, and at Gwalior where the Rani of Jhansi was killed at the head of her troops, and Sindia was restored to the capital from which he had been expelled.

#### Reorganisation after the Mutiny.

When the country had been pacified, the Government of India was assumed by Queen Victoria, and the East India Company ceased to exist. The Company's European regiments were transferred to the crown, and a regular system of relief of British regiments employed in India was instituted, the charges being paid out of the Indian revenues. The Bengal Army had almost disappeared; and while a new army was raised in that Presidency, the Madras

and Bombay armies were also reorganised. Native artillery was abolished, with the exception of some mountain batteries and the field batteries of the Hyderabad Contingent. The officering of the reorganised armies was carried out by the organisation of a Staff Corps for each Presidency, on which the officers were all borne on a general list and supplied to regiments and to the staff. On completion of the reorganisation in 1863, the armies had the following strength:—

Bengal Army—19 Cavalry and 49 Infantry regiments.

Madras Army—4 Cavalry and 40 Infantry regiments.

Bombay Army—7 Cavalry and 30 Infantry regiments.

Punjab Frontier Force—6 Cavalry and 12 Infantry regiments.

Hyderabad Contingent—4 Cavalry and 6 Infantry regiments.

Other Local Corps—2 Cavalry and 5 Infantry regiments.

The total strength amounted to 110,000 men; and there were in India 65,000 British soldiers. The regiments were officered by a reduced cadre eventually fixed at eight British officers to each corps, except that the Hyderabad Contingent and other local corps had an establishment of four only. The promotion of officers was made dependent on length of service, 12 years to Captain, eventually reduced to nine years, 20 years to Major, reduced to 18 years, and 26 years to lieutenant-colonel. The Staff Corps system, which still continues in fact though not in name, has the disadvantage that it entails the frequent transfer of officers from one corps to another.

#### Minor Campaigns.

During the period succeeding the mutiny, until 1870, when the second Afghan War began, there were many minor campaigns, including the Ambeyla expedition, the China War of 1860, and the Abyssinian War, when Napier of Magdala, who had fought in the Sikh Wars and in the Mutiny, commanded the expeditionary army. There followed the Afghan War, in which the leading figure was Lord Roberts. There were expeditions to Egypt and China, and various frontier campaigns, the most important of which was that on the North-West Frontier in 1897, since when that turbulent country has been generally quiet. There were also the prolonged operations following on the annexation of Burma, several campaigns in East Africa and Somaliland, and the expedition to Lhasa. But since the Afghan War the Army of India, except that portion of the British garrison which was sent to South Africa, has had little severe fighting, although engaged in many arduous enterprises.

#### Reforms.

The twenty years which began in 1855 witnessed many reforms and augmentations of the Indian Army, due to preparations to resist the menace of the Russian advance towards India. The composition of the Army was improved by the elimination of unwelcome men from the ranks. In pursuance of this reform many Madras regiments were reduced and replaced by corps composed of more virile races. "Class" troops and

companies were formed instead of men of every caste and creed being mingled in the ranks and in some cases class regiments were raised. But it is generally held that, it is better to form regiments of class companies and troops, although the class regiment has its advocates among those who hold that such an organisation facilitates segregation in case of trouble. In 1887 we find the British Army in India numbering about 74,000 and the Indian Army 153,000 men. In 1888 Indian battalions were grouped in threes, each with a regimental centre, and reserves for the native army were instituted; these have been gradually augmented until the establishment numbers 25,000. In the following year Imperial Service troops, to be placed at the disposal of the British Government in case of emergency, were raised in Native States. These number 21,000 men officered by Indians and having inspecting officers furnished by British Officers of the Indian Army. In 1891 the Staff Corps of the three Presidencies were amalgamated, the first step in the abolition of the Presidency distinctions, furthered two years later by the abolition of the appointments of Commander-in-Chief of the Madras and Bombay Armies. While the fighting strength of the Army had been augmented and improved during all these years, the administrative services had not been neglected. The Supply and Transport services were improved and the Ordnance and Military Works were reorganised, and measures were taken for the improvement of defences, mobilisation and equipment. Changes were made in regimental organisation, and the pay and allowances of the troops were raised from time to time.

The number of British officers has been augmented at intervals. The establishment in the native infantry formerly consisted of a Commandant, two Wing Commanders, and five Wing Officers. In 1900 the Double Company system was instituted, each pair of companies being placed under a Double Company Commander, the Wing Commanders being abolished. The establishment of regiments now includes 13 or 14 British officers, squadrons and companies being commanded by native officers, of whom there are 16 in a regiment, Risaldars and Subadars commanding troops and companies, while Jemadars are their subalterns.

#### Lord Kitchener's Work.

The most momentous changes that have taken place in the Indian Army since the post-mutiny reorganisation were carried out under the regime of Lord Kitchener, who assumed the office of Commander-in-Chief at the end of 1902. When Lord Kitchener arrived in India, the Commander-in-Chief had only executive command of the Army, with an Adjutant-General and a Quartermaster-General as his Chief Staff Officers. There was no General Staff, the Staff of the Army in India being divided between the departments of the Adjutant-General and Quartermaster-General. The administrative departments of the Army were under the Military Member of the Governor-General's Council, of which the Commander-in-Chief was an extraordinary member. The condition of affairs was not satisfactory. The proposals of the Commander-in-Chief regarding

measures involving expenditure had to be submitted to the Financial Department through the Military Department, which had entire control also of the Supply and Transport, Ordnance, Military Accounts, Remount and Military Works Departments. The consequence was frequent differences of opinion between the Military Department and Army Headquarters.

Lord Kitchener organised a General Staff, and established a Staff College at Quetta for the training of officers in the requisite duties; a Chief of the Staff was appointed, and the proper division of the work of Staff Officers was made, those of the General Staff being made responsible for the branch dealing with the Art of War, including the training of troops, while routine and administrative duties were undertaken by officers of the Adjutant-General's and Quartermaster-General's Departments.

On arrival in India Lord Kitchener found that the military system, originally constituted on sound lines, had gradually departed from the intention of its founders, and much of the power properly belonging to the Commander-in-Chief had been usurped by the Military Department, while a succession of economical Finance Ministers had so cut down the military estimates and held the purse-strings so tightly that it was impossible to force through any costly measure for the defence of the country. The military chaos which was the slow growth of a hundred and fifty years of constantly changing conditions required remoulding into an orderly cosmos. The army was in many respects, with its want of proper organisation for external war, its ponderous and antiquated administrative system, its faulty distribution in units scattered on no known strategical plan, more suited to the circumstances of a bygone age, when the country had only recently been conquered and troops had to be retained at remote and isolated stations to overawe the inhabitants. While the Commander-in-Chief was a strong and determined man with a genius for organisation, the Viceroy was also a great personality, holding strong convictions, and naturally a champion of the civil power. Lord Kitchener wished to remove the obstruction of the Military Department. Lord Curzon could brook no weakening of the power of the Civil Government. The question was not merely one of the abolition of a Department which had grown obsolete in its methods. It was a question of the status of the Chief Military Authority in the country.

#### Military Department Abolished.

On the recommendation of a Committee composed of Lord Roberts, Sir George White and Sir Edward Law, the Military Department was abolished, and the Military Supply Department established in its place in 1905. Lords Curzon and Kitchener again came into conflict regarding the personnel of the new Department, and the former resigned. The Commander-in-Chief now set about the task of reform. He had since his arrival in India been studying the situation, reviewing the state of our military organisation, grasping its defects and contemplating its needs. The advance of Russia towards the Hindu Kush dominated the situation as it had done for the best

part of a hundred years. Under the old chaotic system the mobilisation scheme provided for the despatch of two armies, one through the Khyber, the other by way of Quetta to Kandahar. From the North-West alone, whence the conquering hordes of all the invaders whose march is recorded in history had poured from time immemorial, was the Empire of India subject to menace from without.

But under the system then existent the measures arranged for defence provided for a force of only four Divisions of all arms. This force was not only inadequate in numbers but in capacity for expansion. Its distribution and organisation were more suited for policing internal India than to contend with an external foe. The troops were distributed in Districts under generals whose commands were geographical in designation and in area. Here were no complete Army Corps, Divisions, and Brigades ready to take the field. In case of war the troops for the field army were to be drawn from all parts of India, the various units being sorted out into Brigades and Divisions on arrival at the base of operations, and provided with a scratch lot of generals and staff officers for the occasion.

#### Army Re-distributed.

It was in the reorganisation of the scattered and heterogeneous forces of the Indian Empire that Lord Kitchener's great work lay. Some steps had already been taken towards the abolition of those Presidency distinctions which formerly divided the Indian native forces into three armies supplemented by a congeries of local forces. But he found three armies, each confined to its own geographical limits, beyond which its units and its personnel did not ordinarily proceed; or when they did, they carried the chains which linked them to their respective Presidencies. The units of the Indian Army were renumbered, a fruitful cause of confusion being thus eliminated; Presidency and local distinctions were abolished, and a homogeneous army, though composed of heterogeneous races, free to benefit by the experience of service in any part of India, was created. The experience of 1857 proved the measure of safety provided by the presidential system of three armies with nothing in common between them; but the new regime considered that the conditions of fifty years ago were obsolete, and had been entirely changed by increased facilities and rapidity of communication throughout the Empire.

The whole army was formed into nine Divisions, exclusive of the Burma Division, each with its proper complement of the three arms, under its General with staff complete. These Divisions were organised for war; each one could take the field intact, leaving behind sufficient troops for the maintenance of internal order. Arrangements were made for the organisation of supply and transport. The reserve was not sufficiently large to supply the wastage of war; it was expanded, the infantry reserves being augmented, while the cavalry was included in the system. Small and isolated stations were by degrees abandoned, the Divisions, or at least the Brigades, being assembled with a due regard to strategic requirements and to the necessities of training, though some are extended over a

wide area of country. The nine divisions were distributed between two armies, each with its Commander, their heads resting on the main routes at Quetta and Peshawar.

The Military Supply Department, with its Member on the Governor-General's Council, was abolished in due course; an Army Department was created, to deal with much of the business carried on by its predecessor, with a Secretary in Charge. The Commander-in-Chief is now the only Military Member of Council, and it is a question whether he has not a burthen greater than one man can bear. The recommendations of Lord Robert's Committee have been ignored, for that Committee recorded the opinion that "the concentration of the whole responsibility of Supply of the Army under one head, if that head is to be the Commander-in-Chief, would be opposed to all modern principles in regard to Armies." It was feared that the system now obtaining would lead to the diversion of too large a portion of the time of the Commander-in-Chief from his natural military duties; and it certainly appears that the functions and status of that high officer have largely altered.

Indian regiments are numbered consecutively, the infantry from 1 to 130, the cavalry from 1 to 39. They have subsidiary titles based upon their composition, their territorial origin, or the names of distinguished officers with whom they were connected.

British troops are periodically relieved from England and the Colonies, regiments ordinarily being some fifteen years in India, where they are kept on a war-footing by drafts sent from the regimental depots. Native troops consist of every warlike class, a great variety of races being found in the ranks. Gurkhas and Sikhs to a great extent, are organised in class regiments. There are Rajputs of both Oudh and the United Provinces; Jats, Dogras, Mahrattas, Pathans, Baluchis and Hazaras. Mahrattas are enlisted in Regiments of the old Bombay Army; Mahomedans from the south of India and from Hindustan are found in the ranks of many corps, and most of the Frontier tribes furnish their quotas.

The native officers generally rise from the ranks, but some are given direct commissions, although this system has not been largely adopted. The volunteers form a valuable and efficient body of men, who would be most useful in emergency, having a good knowledge of the use of arms and furnishing some of the best shots in the country.

The Military Police is largely composed of warlike races, especially in Burma, which is mainly garrisoned by these corps, while in Central India the aboriginal Bhils find employment in the ranks. These, however, though a useful auxiliary, do not form part of the Army, and serve under the orders of the Civil Government.

The Divisions of the Army are distributed as follows, their headquarters being at the Stations indicated.

Northern Army. Headquarters-Murree.		
1st Division	..	Peshawar
2nd "	..	Rawal Pindi
8rd "	..	Lahore
7th "	..	Meerut
5th "	..	Lucknow

Indian Brigades.

Derajat Brigade ..	Dera Ismail Khan
Bannu Brigade ..	Bannu
Southern Army. Headquarters—	Ootacamund.
4th Division ..	Quetta
5th " ..	Mhow
6th " ..	Poona
9th " ..	Ootacamund
Burma Division ..	Mandalay

Services of the Sepoy Army.

The history of the Army of India has now been traced since its inception down to the present time. The military history of the world presents no more remarkable spectacle than that of the great army of soldiers of fortune which, led by a few British officers, has carried our flag into every corner of the Eastern Hemisphere during the past hundred and fifty years. Soldiers by birth and breeding the sepoys of Hindustan and of the four quarters of India have served the Empire from Northern China to Ceylon, from Egypt to the Islands of the Eastern seas, in Belgium and in France. In the conquest of India itself, in seconding the valour of a handful of British soldiers, they have borne a conspicuous part. The very men who opposed us so courageously in war—Sikhs, Gurkhas, Pathans of the North-West Frontier, Jats and Rajputs—have fought with no less valour in the ranks of our army. They sailed to the conquest of Bourbon, Mauritius and Java. With Cornwallis and Harris they traversed the passes which led them to Mysore and Seringapatam. Under Stringer Laurence Clive, Eyre Coote, Lake and Wellesley they helped to oust the French from Southern India. The great theatre of war in which they fought was diversified by every physical feature and characterised by considerable varieties of climate. From Chitral to Makran our soldiers have followed in the footsteps of Alexander the Great. On the banks of the Hydaspes, on the very ground where the Macedonians defeated Porus two thousand years before, they fought the battle of Chillianwala against the Sikhs, who have themselves since been among the bravest soldiers of our army. Every pass on the frontier traversed by the invaders of old contains the bones of brave men who have fallen in our service. The rude mountaineers of the frontier have eagerly entered the ranks of our army. Beyond the limits of India our soldiers have entered most of the capitals of the East. They have carried the flag to Cabul, to Cairo, to Lhasa, to Peking, to Ava and to Mandalay. Sepoys accompanied Baird, and eighty years later Wolsley, to the Nile. The dark page of the Mutiny is itself illumined by many gallant deeds performed in our service by the native soldiers of the Empire. Lucknow was not defended by Europeans alone; among the bravest men on the Ridge before Delhi were men of Indian races; in the glorious campaign in Central India 1858 the wings of Sir Hugh Rose's Army were composed of native cavalry; the mutiny veterans who tottered into the arena at the Coronation Durbar at Delhi had in their ranks many soldiers of native race.

**The Army and the War.**—In 1914, when the Great War broke out, H. E. the Viceroy, speaking on behalf of the whole country, pledged every

man, British and Indian, to the service of the Raj, and a great force of all arms, estimated to reach 200,000, was despatched to the seat of war in France and Belgium, in East Africa, Egypt, Turkish Arabistan and Shantung. The Force in France constituted the only trained reserve available in the British Empire at the time. Its services therefore must be measured not only by what it did, but by the fact that it was the only force available for the duty. It took part in some of the hardest fighting, and this in the strange conditions of the cold, the wet and the mud of Flanders, in trench fighting, which was even more strange to the Indian troops than to those of the European armies, and under artillery fire which subjected them to an unprecedented strain. The gradual strengthening of the British forces and the pending advent of another winter induced a fresh consideration of the employment of these troops in France, and towards the close of 1915 it was decided not to subject them to the ordeal of another campaign in the European winter. The Indian Expeditionary Force was therefore withdrawn, with the exception of the Cavalry Division. It was re-constituted in Egypt and distributed for service either in India or on some other part of the battle front. One cavalry brigade was subsequently withdrawn. Before the Force left France, His Majesty the King-Emperor sent the following message, which was delivered by the Prince of Wales on November 21 and subsequently issued in the form of a communique:—

"Officers, non-commissioned officers and men of the Indian Army Corps.—More than a year ago, I summoned you from India to fight for the safety of my Empire and the honour of my pledged word on the battle-fields of Belgium and France. The confidence which I then expressed in your sense of duty, your courage and your chivalry you have since then nobly justified. I now require your services in another field of action, but before you leave France, I send my dear and gallant son, the Prince of Wales, who has shared with my armics the dangers and hardships of the campaign, to thank you in my name for your services and to express to you my satisfaction.

"British and Indian comrades in arms, yours has been a fellowship in toils and hardships, in courage and endurance, often against great odds, in deeds nobly done in days of an ever-memorable conflict. In a warfare waged under new conditions, and in peculiarly trying circumstances you have worthily upheld the honour of the Empire and the great traditions of my army in India.

"I have followed your fortune with the deepest interest and watched your gallant actions with pride and satisfaction. I mourn with you the loss of many gallant officers and men. Let it be your consolation, as it was their pride, that they freely gave their lives in a just cause for the honour of their sovereign and the safety of my Empire. They died as gallant soldiers, and I shall ever hold their sacrifice in grateful remembrance. You leave France with a just pride in honour of the deeds already achieved and with my assurance of confidence that your proved valour and experience will contribute to further victories in the fields of action to which you go. I pray God to bless and

guard you and to bring you back safely when the final victory is won each to his own home, there to be welcomed with honour among his own people."

**Lord French's Tribute.**—The message which Viscount French issued to the Indian Corps was officially published in India, some six months later than that of the King. Lord French describes the British troops of the corps as having borne themselves in a manner worthy of the best traditions of the Army.

The Indian troops (he adds) have shown most praiseworthy courage under novel and trying conditions, both of climate and of fighting, and have not only upheld but added to the good name of the Army which they represent. This is all the more praiseworthy in view of the heavy losses among the British officers which deprived the Indian ranks of many trusted leaders whom they knew well, and of the fact that the drafts necessary to maintain your strength have frequently had to be drawn from regiments quite unconnected with the units they were sent to reinforce. You have done your work here well.

I thank you for the services you have rendered while under my command, and trust that the united efforts of the Allies may soon bring the enemy to his knees and restore peace to the world.

A no less emphatic tribute, and one taking a wider sweep, was paid by the Secretary of State for India, when presiding at the lecture of Sirdar Daljit Singh, of the India Council, upon the Sikhs at a meeting of the Indian Section Royal Society of Arts.

Mr. Chamberlain said that the Indian Army had served for the first time in a great European War; it had been employed not only in France, but in Egypt, in Gallipoli, at Aden, in East and West Africa, and in Mesopotamia. Wherever there had been work to do and stout hearts had been needed, India had sent her sons to play their part with the men of other portions of the Empire in defence of their Sovereign's Crown and of the liberties of the Empire to which they belong.

### The Fighting Races.

The fighting classes that contribute to the composition of the Indian Army are drawn mainly from the north of India. Of these there are 35 squadrons and 214 companies of Sikhs, who thus furnish a great part of the strength of both Infantry and Cavalry. The Sikhs, of whom an account has already been given, are distributed throughout the Punjab. Mahomedans of various races contribute a still larger proportion to both arms. These are drawn both from the north and south of India, as well as from beyond the frontier, where the tribes contribute 56 companies to our Infantry; while the Musalmans and Pathans of India itself furnish between them 68 squadrons of Cavalry and 250 companies of Infantry. These are all excellent fighting men, hardy and warlike, who have furnished soldiers to all the great powers of India for many hundreds of years. Large numbers of Mahomedans were to be found in the ranks of the Mahratta armies which opposed us during the early part of the last century. As Cavalry the Mahomedans are perhaps unequalled by any other race in the East, being good horsemen and expert men-at-arms.

Next to these in point of numbers are the little Gurkhas of Nepal, of whom 161 companies serve in the ranks of the Infantry. These, with the exception of one company in the Guides, are formed in twenty complete battalions. As fighters in the hills, the Gurkhas are unsurpassed even by the Pathans of the North-West Frontier. Their proficiency as soldiers was first proved in the Nepal War of 1814, when they fought against us and has subsequently been displayed on many a field in the ranks of our army. The cheerful and steady discipline of the Gurkha has always rendered him a valuable soldier, while his proficiency in the use of arms, including the national *Kukri*, has made him terrible in war. While such a wonderful marcher in the hills, the Gurkha soon tries in the plains.

The professional military caste of India from time immemorial has been the Rajput, who inhabits not only Rajputana but the United Provinces and Oudh. Of fine physique and martial bearing, these warriors of Hindustan formed the backbone of the old Bengal Army, and have sustained the British flag in every campaign in the East. Their high caste and consequent prejudices in no way interfere with their martial instincts and efficiency in war. This class now furnishes 10 squadrons of Cavalry and 100 companies of Infantry in our Army. Other classes which are found in the ranks are Jats, Dogras, Brahmins and Mahrattas. The Jats are a fine and warlike race, found in the Delhi and Rohtak districts and adjacent territory. It was these people who held out so bravely at Bharatpur and repelled three attacks delivered against their stronghold by Lord Lake's army in 1805. They now furnish us with 21 squadrons of cavalry and 60 companies of Infantry. Dogras are good and steady soldiers found in the hilly districts of Punjab. The ruling Chief of Kashmir is of this caste, of which are 11 squadrons and 56 companies in the army. Brahmins are not now largely enlisted; while the Mahrattas, famous as predatory horse in the historic past, now compose 54 companies of Infantry. They are chiefly recruited in the Deccan and the Konkan. Nor must we forget the Hill Rajputs of Garhwal, good and gallant soldiers, who supply two battalions; and the low caste men of Madras so efficient as Pioneers and Sappers. Some 9,000 Madrasis are still in the ranks.

**New Regiments.**—In 1916 two important steps were taken. In response to a strong desire manifested, the Government accorded sanction to the raising of an Anglo-Indian Regiment. By Anglo-Indian it should be understood that a change in nomenclature was made in the Census of 1911. The term Anglo-Indian used to connote the Englishmen resident in India; by the census it was made to embrace what used to be called the Eurasian, or Domiciled community, terms which have now passed into desuetude. Recruiting proceeded all over the country and the men enlisted were sent to Quetta to be trained. In August, a Bengali double company was raised. Since the advent of the British to India if not before, the Bengalis have not been reckoned amongst the fighting races and recruiting has not been practised. This exclusion during the war aroused protest, and at Dacca on August

7th, Lord Carmichael, Governor of Bengal, made the following announcement :—

"The Viceroy has been considering the position with the Commander-in-Chief and other members of his Government. They have determined to try as an experimental measure to raise a double company of infantry composed of Bengalis on precisely the same terms as are offered to the Indian Army generally. The enlistment will be for the period of war with option to the soldier or remaining if he chooses in the service after its conclusion. The double company when formed will be located on the frontier for training and when properly trained may be sent on field service. That the Government of India should be willing to consider this now, while the war is going on, shows that they have not neglected the feelings of Bengal, that they should be willing to make an experiment is a proof that they do sympathise with us, that they do believe that Bengalis are loyal and are devoted. Surely it is the duty now of every one who loves Bengal, to see that the experiment shall succeed, to show that emotional and impetuous as the Bengalis undoubtedly are, they are generous enough to exercise self-control, that they are ready to submit to discipline and will do their part when asked just as well as other people do their part without demanding any exceptional or better terms."

The Bengalis had already raised an Ambulance Corps, which did good service in Mesopotamia. The announcement was received with general satisfaction, and the opinion was expressed that the required number of men would be readily forthcoming.

#### **Improvements in Conditions.**

Many improvements have been made in the pay of the soldier and the conditions of service. They are thus summarised in the Report on the Moral and Material Progress of India for the decade 1901-02 to 1911-13. The decade began with an increase of the pay of British troops due to the adoption in India of the proposals of the Home Government for an increase of 2d. a day from the 1st April 1902. This involved an additional charge on Indian revenues of some £225,000 a year. In April 1904 a further increase of from 4d. to 7d. a day was given in the form of service pay. The whole of the service pay issued in India was in accordance with the decision of the Lord Chief Justice, acting as arbitrator between the Imperial and Indian Governments, borne by the latter, the extra charge being thus raised to about £700,000 a year. From the 1st January 1909, in accordance with the intention announced in the Proclamation of the King Emperor on the fiftieth anniversary of the transfer of Government to the Crown, a general increase of pay for all ranks was granted to the Indian Army, and arrangements were made for the free supply of fuel by Government at a cost of £427,000 a year. The increase was Rs. 3 a month for non-commissioned officers and men of the sildadar cavalry and Rs. 2 for other troops. Other measures that may be noticed were the raising of the kit money granted on enlistment and the introduction of a boot allowance, the grant of free grass to sildadar cavalry when on the march or at manœuvres and of free passages by rail

(within certain limits) for men called home on urgent private affairs—all introduced in 1906; the revision and improvement of the pension rules of the Native Army, and the abolition of the punishment of flogging in time of peace, except for offences for which that punishment is permissible in civil life, in 1907-08; and a revision of the rates of pay of captains and subalterns of the Indian Army, and of regimental salaries, involving a considerable addition to the emoluments of the junior grades in 1909. Since 1910, considerable progress has been made with the improvement of the accommodation for the native troops. It had become obvious that this improvement was a matter of urgency in many cases, and with the persistent rise in prices and wages comfortable and durable buildings could no longer be constructed without a considerable increase of expenditure. In the new lines, a sound type of construction has been adopted, and the work has been entrusted to the Military Works Service instead of to regimental agency. Finally a bonus of half a month's pay, was granted to all non-commissioned officers, and men and reservists of both the British and Indian armies, and to the equivalent ranks of the Royal Indian Marine, at the Coronation Durbar in 1911, at a cost of about £166,000. On the occasion of the Coronation Durbar of 1902, a money grant to be spent at the discretion of officers commanding was made to all British and native troops.

#### **Reserves.**

The Indian Army Reserve dates from 1886. Under existing arrangements, it consists of men with not less than three years' colour service. Men passing into the Reserve still belong to their respective regiments, and come up for two months' training once in two years. In 1904 when the strength of the Reserve was about 24,500 men, it was decided to raise it gradually to 50,000 men, reducing the reserve pay from Rs. 3 to Rs. 2 a month, and also to form an Indian cavalry reserve by extending the system to Sildadar cavalry regiments. Reservists obtain a pension after 25 years' total service. There is a body of reserve officers whose numbers were largely increased soon after the outbreak of the war.

**Reserve of Officers.**—For some years there has been entertained what was called The Indian Army Reserve of Officers—a small body of trained officers who would be available to replace the casualties amongst the British officers serving with the Indian troops in time of war. This branch of the service was however grievously neglected; the conditions of service were unattractive, the prospects of promotion were practically nil; and the military authorities preferred to rely on the expedient of multiplying the number of British officers serving with Indian troops in order to meet casualties, rather than to train up an effective reserve. This policy tested by the war was found wanting. The casualties amongst the British officers with the Indian regiments were very large indeed; these regiments lost their initiative when deprived of the officers on whom they had been taught to rely, and it was impossible to make the great gaps good from the ordinary officer class, because of their lack of knowledge

of the Indian languages and Indian conditions. An appeal for recruits for the Indian Army Reserve of Officers met with a very ready response. The first enrolments reached the substantial figure of fourteen hundred, a very large proportion of whom were drawn from the Volunteer Officers, or from the ranks of special corps like the Light Horse, who are ordinarily recruited from the officer class. The officers selected were put through a rapid course with British and Indian regiments; made to pass a language test, and when efficient were sent to serve with the Indian regiments at the front. They have done excellent service and have suffered many casualties; indeed, without this reinforcement of officers specially acquainted with Indian conditions, the efficiency of the Indian Regiments could not have been maintained. It is understood that the numbers are now being raised to between two and three thousand.

### The Imperial Service Troops.

The voluntary movement towards co-operation in the task of Imperial defence that led to the formation of the force of Imperial Service Troops was initiated in 1887 by an offer made by the Nizam of Hyderabad, whose example was at once followed by a number of the leading Native Princes. The troops, which are under regular inspection by British Officers, though available for Imperial service when placed at the disposal of the British Government by their Rulers, belong to the States and are recruited from their subjects. Their armament is the same as that of the Native Army, and in training, discipline, and efficiency they have reached a high standard of excellence. They have done good service on the North-West Frontier and also in China and Somaliland. At the beginning of the decade (1901-02 to 1911-12) twenty-three States between them supplied a total of over 16,000 men. Some additional offers of contingents have since been accepted, and the total strength is approximately 22,271, towards which twenty-nine States contributed. The total included some 10,000 infantry, and 7,500 cavalry, while transport and camel corps contributed 2,700 and 700 men respectively. Sappers also numbered about 700. Gwalior contributes nearly 4,000 men, and Kashmir over 3,500; Patiala, Hyderabad and Alwar contribute over 1,000 each. On the outbreak of the war practically the whole body of Imperial Service Troops were immediately placed at the unfettered service of the King-

Emperor. Many of these offers were gratefully accepted and large bodies of Imperial Service Troops proceeded to one or other of the theatres of the war.

### Volunteers.

The Volunteers of India may be classed under the head of British forces. They include foot and mounted Rifle regiments, light horse, and garrison artillery, with some electrical engineer and other specialised companies. Their role is the defence of ports, railways, cantonments, and civil stations, a number of rifle corps are recruited from railway employees, forming valuable bodies for the defence of their respective railways.

On the outbreak of the war a general desire was expressed that a Volunteer Brigade should be raised for active service. It was decided that the place of the Volunteer corps was in India. Considerable numbers were, however, sent to the front, either in motor cyclist or machine gun detachments, and a large number joined the Indian Army Reserve of Officers. According to the latest official returns, the total number of volunteers in India was 43,671. There was however a larger accession of strength after the outbreak of the war and the vote for the Force was larger by Rs. 1½ lakh. The Force must now be over fifty thousand strong and its efficiency has markedly improved.

The Indian Volunteer Ordinance (No. 4 of 1914) placed the members of any corps or portion of a corps of volunteers called out for actual military service under S. 27 of the Indian Volunteers Act, 1860 (XX of 1860), under military law, the officers as officers, and the non-commissioned officers and men as soldiers, and the Army Act was applied to them accordingly. But non-commissioned officers and men enrolled before the promulgation of the Ordinance were empowered to quit the corps within one month after that promulgation.

### The Imperial Cadet Corps.

The Imperial Cadet Corps was founded in 1901, with the object of providing military training for the scions of ruling and noble families. The Corps consists of about 20 young men of noble birth who have been educated at the Chiefs' Colleges. The course of instruction lasts between two and three years, and the cadets are taught military exercises and military science. Its headquarters are at Dehra Dun.

## MILITARY FLYING SCHOOL.

The Government of India sanctioned the establishment of an India Central Flying School, at Sitaapur, with effect from the 1st October, 1913; but the work of the school has been suspended during the war. The object of this school is to gain experience in aviation under Indian conditions with a view to its ultimate expansion as a training establishment. The Commandant has entire control of the school under the direct orders of Army Headquarters to the Ordinance Branch, of which an Assistant Director of aeronautics was appointed in July, 1916, to deal with and advise on all matters connected with aeronautics. The school consists of a commandant and three flying officers with the necessary

medical and subordinate personnel. The British and Indian subordinate staff consists of civilians only engaged on contract for specified periods.

**Conditions of appointment.**—The qualifying conditions of appointment for the commandant, and flying officers, are as follows:—

(1) To hold a Royal Aero Club's pilot certificate; (2) to be recommended by his Commanding officer; (3) medical fitness (as stated below); (4) not less than two years' service (British service), three years' service (Indian Army). In addition Indian Army officers must have qualified for "final retention"; (5) not above the rank of Captain; (6) a natural bent for the mechanical; (7) and to be unmarried.

Officers are appointed to the staff of the school for a period of four years from the date of joining, the appointment being probationary for the first six months, they will be seconded in their regiments. An officer who is found at any time to be unfitted for the duties of the appointment will be required to rejoin his regiment. If injured on flying duty the Commandant and flying officers will be eligible for gratuities and pensions under the conditions and at the rates laid down in Army Regulations, India, Volume 1, Paragraph 748 *et seq.* For officers who have been wounded in action in the event of death within seven years as the result of injuries so received pensions, etc., may be awarded under the conditions applicable to the case of officers killed in action or dying of wounds received in action.

**Equipment.**—The Maharaja of Rewah has generously presented an aeroplane to the Central Flying School. This is of Royal Aircraft factory design and has a 70 h. p. Renault air cooled motor, giving a machine speed of 72

miles per hour. Other machines consist of two 80 h. p. Gnome and two Maurice Farman bi-planes (70 h. p. Renault). The school possesses a portable hangar which will remain erected on the aerodrome until permanent sheds are ready for occupation. The portable hangar will then become available for housing machines. The aerodrome at Sitapur is in area roughly of 400 acres. The first flights were made on February 24, 1914, when a Rewah aeroplane was used and each officer flew in turn for a short time.

**Staff of the school.**—The staff of the Indian Central Flying School normally consists of:—1 Commandant at Rs. 1,200 per mensem and 3 flying officers at Rs. 800 each per mensem.

British Subordinates: 1 engineer, 1 sail-maker, 2 machinists, 2 riggers, and 1 repair shop mechanic.

Indian Subordinates: 1 carpenter, 1 sail-maker, 6 fitters, 2 riggers, 2 repair shop mechanics, and 1 storekeeper.

### \* STRENGTH OF THE ARMY.

The sanctioned establishment of the army in India for 1913-14 and its actual strength on 1st April 1914 were as follows:—

	Sanctioned Establishment.	Actual Strength.
Troops under the orders of the Commander-in-Chief in India:		
British officers .. .. .	5,017	5,001
British warrant and non-commissioned officers and men ..	73,323	73,155
Indian officers, non-commissioned officers, and men ..	160,313	150,574
Troops not under the orders of the Commander-in-Chief:		
British officers .. .. .	9	9
Indian officers, non-commissioned officers, and men ..	24,406	23,077
Total, 1913-14 .. ..	263,128	251,816
„ 1912-13 .. ..	263,555	251,761

In 1913-14 seven battalions of Indian infantry and one battery of Indian artillery were employed in the colonies and in China. One mountain battery of Royal Garrison artillery was employed in Egypt. There was an Indian contingent in Somaliland, and detachments of infantry and cavalry were employed in Persia.

The sanctioned establishment of the Native army reserve was 36,046 and its actual strength on 1st April 1914 was 34,295, as against 33,712 on 1st April 1913.

The number of Volunteers in the whole of India on 1st April was as under:—

	1913.	1914.
Enrolled strength .. .. .	41,083	41,925
Efficients .. .. .	33,830	39,240
Reservists .. .. .	3,178	2,955

The net expenditure on the army (exclusive of Military Works and Special Defence Works) in 1913-14 as compared with that in 1912-13 was as follows:—

	1912-13.	1913-14
	£	£
Effective charges .. .. .	15,231,375	15,402,240
Non-effective charges .. .. .	3,117,348	3,123,493
Total .. .. .	18,348,723	18,585,733

The following table shows the sickness and mortality of the British and Indian troops (excluding officers) in India. During 1914 the death-rate of the British troops in India was considerably higher than that of 1913, which was the lowest on record. There was also a rise in the admission rate. For the Indian troops both death-rate and admission rate were higher than those for 1913, which were the lowest on record. Among European troops malaria continued to be one



of the chief causes of inefficiency. It accounted for 163 per 1000 admissions. Pneumonia and heat stroke were the chief causes of death. Anti-enteric inoculation makes satisfactory progress and 94 per cent. of European troops in India have been inoculated. Among Indian troops malaria was the chief cause of sickness and pneumonia of mortality.

## Ratio per Mille of Strength.

	British Troops.			Indian Troops.		
	Average 1908-12.	1913.	1914.	Average 1908-12.	1913.	1914.
Admissions into hospital ..	638.4	580.5	614.1	578.3	531.7	566.5
Constantly sick .. ..	60.3	29.7	31.8	20.9	21.4	20.9
Deaths .. ..	6.1	3.3	4.3	5.4	4.0	4.2

**Marine.**—The net expenditure on marine services amounted to £519,100 in 1915-16, as against £463,370 in 1914-15. In this amount are included the cost of the Royal Indian Marine and the contribution towards the expenses of His Majesty's ships employed in the Indian seas.

On the 31st March 1915 the Royal Indian Marine consisted of three troopships and six

other sea-going vessels, three inland vessels, three flats, and a number of small steamers, launches, &c. There was an establishment of 105 executive officers, 85 engineer officers, 64 warrant officers, and 12 assistant surgeons of the Indian Subordinate Medical Department, and the native crews of the vessels (seamen, artificers, and others) numbered, in all, about 2,225 men.

## EXPENDITURE ON THE MILITARY SERVICES.

	Accounts, 1912-1913.	Accounts, 1913-1914.	Accounts, 1914-1915.	Revised, 1915-1916	Budget, 1916-1917.
	Rs.	Rs.	Rs.	Rs.	Rs.
<b>INDIA—</b>					
<i>Effective Services—</i>					
Administration ..	69,75,270	71,56,430	64,64,083	51,36,000	52,04,430
Military Accounts ..	29,15,887	30,13,241	28,28,910	25,29,000	25,29,300
Regimental Pay, etc. ..	12,20,93,251	12,23,80,051	10,88,36,245	7,97,81,000	7,68,01,520
Supply and Transport ..	3,36,92,689	3,42,78,307	8,12,17,805	2,46,54,000	2,70,10,580
Veterinary .. ..	5,00,023	5,02,617	3,75,784	1,75,000	1,74,860
Clothing .. ..	15,68,321	19,26,690	20,59,547	24,54,000	17,32,620
Remounts .. ..	40,28,434	46,52,456	62,12,080	46,10,000	40,60,270
Medical Services ..	56,96,320	57,50,474	53,53,407	27,60,000	27,60,180
Medical Stores ..	5,06,157	5,51,826	3,34,215	4,50,000	5,54,020
Ordnance .. ..	98,54,097	93,87,161	1,01,46,288	85,50,000	1,12,83,390
Ecclesiastical .. ..	4,30,154	4,27,183	4,08,819	4,05,000	3,85,130
Education .. ..	12,41,097	13,47,675	10,04,196	6,34,000	7,08,660
Compensation for food, etc.	57,56,698	62,81,040	52,56,955	35,84,000	32,34,000
Miscellaneous Services	31,25,192	28,42,035	3,48,63,084	9,92,11,000	11,13,51,810
Hutting .. ..	6,98,816	2,10,975	1,86,651	2,37,000	2,00,000
Conveyance by road, river and sea.	15,95,814	8,47,034	7,98,532	6,41,000	6,70,540
Conveyance by rail ..	38,62,887	42,48,200	48,67,594	44,03,000	46,03,780
Cantonments .. ..	14,75,915	24,27,498	14,47,274	13,84,000	13,88,910
Unadjusted Expenditure.	—6,79,193	1,29,023	39,308	....	....
<b>TOTAL RS. ..</b>	<b>20,02,37,829</b>	<b>20,85,59,916</b>	<b>22,17,00,777</b>	<b>24,15,98,000</b>	<b>25,46,54,000</b>
<i>Non-effective Services—</i>	1,07,43,291	1,09,57,429	1,10,06,881	1,27,23,000	1,37,93,000
<b>TOTAL INDIA RS. ..</b>	<b>21,69,81,120</b>	<b>21,95,17,345</b>	<b>23,27,07,658</b>	<b>25,43,21,000</b>	<b>26,84,47,000</b>
<b>Equivalent in sterling £.</b>	<b>14,465,408</b>	<b>14,634,490</b>	<b>15,513,844</b>	<b>16,954,700</b>	<b>17,896,500</b>

## EXPENDITURE ON THE MILITARY SERVICES.

	Accounts, 1912-1913.	Accounts, 1913-1914.	Accounts, 1914-15.	Revised, 1915-1916.	Budget, 1916-1917.
—					
ENGLAND—		£	£	£	£
Effective Services—					
Payments to War Office for British Forces.	941,613	917,287	930,620	929,400	930,700
Furlough allowances, etc., of British Forces.	141,456	145,302	78,003	13,000	9,000
Consolidated Clothing Allowances of British Soldiers.	455	412	24,700	6,800	...
Furlough allowances, Ind an Service.	355,676	361,405	265,259	148,000	148,000
Indian Troop Service.	266,421	298,777	85,206	547,800	282,300
Other heads .. ..	107,854	115,019	142,741	74,800	38,500
Clothing Stores ..	52,712	92,665	90,434	143,000	90,900
Ordnance and Miscellaneous Stores.	506,097	500,328	479,481	319,000	151,000
Medical Stores ..	95,980	94,406	94,501	120,000	121,700
Supply and Transport Stores.	52,879	41,122	61,901	80,000	57,500
Military Farms Stores.		11,294	11,470	12,000	17,400
Operations in Persian Gulf (Stores).	43,848	39,373	18,572	....	....
Aviation Stores ..	....	....	....	60,000	....
Stores taken to India with Troops.	24,409	17,586	17,254	9,800	600
TOTAL £	2,589,430	2,638,876	2,300,746	2,469,606	1,858,600
Non-effective Services—					
Payments to War Office for British Forces	919,183	927,029	916,073	864,400	766,000
Pensions, Indian Service	1,425,242	1,407,596	1,374,339	1,310,000	1,295,000
Other heads .. ..	177,263	181,248	201,557	251,500	263,000
TOTAL £	2,521,688	2,515,873	2,521,969	2,425,900	2,324,000
TOTAL ENGLAND £	5,111,118	5,154,749	4,822,715	4,895,506	4,182,600
TOTAL EXPENDITURE £	19,576,526	19,789,239	20,336,559	21,850,206	22,079,100
RECEIPTS.					
India .. .. Rs.	Rs. 1,33,60,617	Rs. 1,27,91,798	Rs. 1,12,24,641	Rs. 82,07,000	Rs. 88,30,000
Equivalent in sterling £	£ 890,708	£ 852,320	£ 748,509	£ 517,100	£ 588,700
England .. .. £	£ 337,095	£ 351,186	£ 347,882	£ 316,300	£ 314,700
TOTAL RECEIPTS £	£ 1,227,803	£ 1,203,506	£ 1,096,191	£ 893,400	£ 903,400
TOTAL NET EXPENDITURE £	£ 18,348,723	£ 18,585,733	£ 19,240,368	£ 20,956,806	£ 21,175,700

**ESTABLISHED STRENGTH OF BRITISH AND INDIAN ARMIES IN BRITISH INDIA**  
(exclusive of Indian Artificers and Followers) for the year 1914-15.

CORPS.	Northern Army.			Southern Army.			Total.		
	Com-mis-sioned Off-cers.	Warrant & Non-Com-missioned Officers & Privates.	Total.	Com-mis-sioned Off-cers.	Warrant & Non-Com-missioned Officers & Privates.	Total.	Com-mis-sioned Off-cers.	Warrant & Non-Com-missioned Officers & Privates.	Total.
<b>BRITISH ARMY.</b>									
Royal Artillery ..	292	7,081	7,973	287	7,509	7,796	579	15,190	15,769
Cavalry .. ..	162	3,594	3,756	81	1,797	1,878	243	5,391	5,634
Royal Engineers .	204	9	213	105	6	111	309	15	324
Infantry .. ..	784	28,164	28,948	672	24,126	24,798	1,456	52,290	53,746
Invalid & Veteran Establishment.	..	..	..	..	..	..	..	..	..
Indian Army ..	71	..	71	30	..	30	101	..	101
General List, Infantry ..	..	..	..	..	..	..	..	..	..
General Officers unemployed ..	1	..	1	..	..	..	1	..	1
<b>Total, British Army ..</b>	<b>1,514</b>	<b>39,448</b>	<b>40,962</b>	<b>1,175</b>	<b>33,438</b>	<b>34,613</b>	<b>2,689</b>	<b>72,886</b>	<b>75,575</b>

CORPS.	British.		Indian.		British.		Indian.		British.		Indian.	
	Officers.	Warrant and N-C. O.	Officers.	N-C. O. and Men.	Officers.	Warrant and N-C. O.	Officers.	N-C. O. and Men.	Officers.	Warrant and N-C. O.	Officers.	N-C. O. and Men.
<b>INDIAN ARMY.</b>												
Artillery ..	57	..	6,440	11	..	3,603	68	..	10,043			
Body-Guards ..	4	..	280	4	..	142	8	..	422			
Cavalry .. ..	372	..	15,440	211	..	8,810	583	..	24,250			
Sappers & Miners ..	34	129	1,971	53	212	3,183	87	341	5,151			
Infantry .. ..	1,095	..	65,688	930	..	54,304	2,025	..	119,992			
<b>Total, Indian Army ..</b>	<b>1,562</b>	<b>129</b>	<b>89,919</b>	<b>1,209</b>	<b>212</b>	<b>70,042</b>	<b>2,771</b>	<b>341</b>	<b>159,861</b>			
<b>Imperial Service Troops</b>	..	..	9,077	..	..	11,992	..	..	21,069			
<b>Indian Reserve</b>												
{ Artillery ..	..	..	1,363	..	..	565	..	..	1,928			
{ Cavalry ..	..	..	1,314	..	..	489	..	..	1,803			
{ Sappers & Miners ..	..	..	686	..	..	491	..	..	1,177			
{ Infantry ..	..	..	19,380	..	..	11,836	..	..	31,216			
<b>Volunteers—</b>												
Efficients ..	818	17,799	..	731	20,122	..	1,549	37,921	..			
Reservists ..	19	1,521	..	12	1,533	..	81	8,054	..			

## THE EAST INDIES SQUADRON.

Since 1903 a squadron of the Royal Navy, known as the East Indies Squadron, has been maintained in Indian waters. It has naturally varied in strength from time to time, and of late years in particular there have been several changes in its composition, the most recent being in the direction of strengthening it, owing to the disappearance of strength in the other squadrons of the Eastern Fleet. In 1903 the squadron consisted of one second class and three smaller cruisers and four sloops or gunboats. In 1906, when the policy of withdrawal from Eastern waters was inaugurated, it consisted of two second class and two third class cruisers, and remained at this strength until 1910: when one second class cruiser was withdrawn and two smaller vessels substituted, and three cruisers were lent from the Mediterranean to assist in the suppression of the arms traffic in the Gulf. By 1913 the position of the East Indies squadron had considerably improved. The battleship *Swiftsure* had taken the place of the second class cruiser which had been flagship, and a modern second class cruiser replaced the *Perseus*. This is apparently part of the scheme for constituting a Pacific Fleet of three "units," one unit being the Australian fleet which is ultimately to consist of 8 battle cruisers, 10 protected cruisers, 18 destroyers and 12 submarines, but up to the present it has completed, or nearly so, one battle cruiser, three others, six destroyers and three submarines. The other two "units" will be the squadrons stationed in China and Indian waters respectively.

The East Indies Squadron at the beginning of the war consisted of the following ships (later details are not published in the Navy List):—

Flagship: *Swiftsure*, battleship, 11,800 tons.

Commander-in-Chief, Rear-Admiral Wemyss.  
*Dartmouth*, cruiser, 5,250 tons: Captain Judge D'Arcy.

*Fox*, cruiser, 4,050 tons: Captain, F. W. Caulfield.

*Alert*, sloop, 960 tons: Lieut. A. Johnstone.

*Esplegle*, sloop, 1,070 tons. Commander, W. Nunn.

*Odin*, sloop, 1,070 tons Commander, C. R. Wason.

## Contributions to the Navy.

A cock and bull story, to the effect that the Native Chiefs of India were going to present three super-Dreadnoughts and nine first class cruisers to the Imperial Navy, was started in November 1912, and directed public attention to the question whether India was paying an adequate amount for the services rendered by the Navy. Even the Naval Annual (1913 edition) took part in the agitation for an increased contribution by India. It says:— "Rumour has been persistent regarding the attitude of India towards the Navy. Some exaggerated statements were published during the year, but nothing definite has been done. This is the more surprising when it is remembered that, although the seaborne commerce of India totals 115 millions sterling, the annual contribution to the Navy is only £100,000 out of a total revenue of 82 millions sterling. It is true that very heavy expenditure is involved in the military forces of India, but the commerce, coast protection, and transporting of troops is dependent upon Britain's sea power. There is a prospect that India will voluntarily follow the example of the self-governing Dominions."

The proportion of contributions from the overseas Dominions towards naval expenditure is shown in the following table issued with the last Navy Estimates that gave details:—

Received from	Nature of Service	Total.
		£
India	Maintenance of His Majesty's Ships in Indian Waters..	100,000
	Indian Tiop Service (on account of work performed by the Admiralty)	3,400
	Repayment on account of services rendered by His Majesty's Ships engaged in the suppression of the Arms Traffic in the Persian Gulf .. .. .	64,000
Australian Commonwealth Dominion of Canada.	Contributions on account of liability for Retired Pay of Officers and Pensions of Men lent from the Royal Navy.	10,800
Australian Commonwealth Do.	Survey of the N. W. Coast of Australia .. .. .	7,500
Dominion of New Zealand	Maintenance of an Australasian Squadron and of a branch of the Royal Navy Reserve .. .. .	41,600
	Maintenance of an Australasian Squadron and of the Imperial Navy generally, also of a branch of the Royal Naval Reserve .. .. .	100,000
Union of South Africa	General maintenance of the Navy .. .. .	85,000
Newfoundland	Maintenance of a branch of the Royal Naval Reserve ..	3,000
	Total ..	415,300

## India's Marine Expenditure.

That table, however, only shows a part of the expenditure made by India on the Marine. Since 1869 India has paid a contribution of varying amounts to the Imperial Government in consideration of services performed by the Royal Navy. Under existing arrangements, which date from 1896-7, the subsidy of £100,000 a year, already referred to, is paid for the upkeep of certain ships of the East India Squadron, which may not be employed beyond prescribed limits, except with the consent of the Government of India: The chief heads of marine expenditure, which amounts to nearly £400,000 annually, are shown below. Charges and receipts in respect of pilotage are no longer brought to account under this head :—

					Accounts, 1913-14.	Accounts, 1914-15.	1915-16. Revised.	1916-17. Budget.
EXPENDITURE.								
India	..	..	..	Rs.	38,35,541	36,89,697	31,32,000	38,57,000
Equivalent in sterling	..	£			255,703	215,979	228,800	257,100
England	..	£			257,142	217,391	200,300	450,500
			Total	.. £	512,845	463,370	519,100	707,600
RECEIPTS.								
India	..	..	..	Rs.	13,43,125	20,71,715	29,05,000	27,38,000
Equivalent in sterling	..	£			89,542	198,115	193,700	182,500
England	..	£			....	....	....	....
			Total	.. £	89,542	198,115	193,700	182,500
NET EXPENDITURE . £					423,303	265,255	325,400	525,100

## ROYAL INDIAN MARINE.

The Royal Indian Marine (The Sea Service under the Government of India) traces its origin so far back as 1612 when the East India Company stationed at Surat found that it was necessary to provide themselves with armed vessels to protect their commerce and settlements from the Dutch or Portuguese and from the pirates which infested the Indian coasts. The first two ships, the Dragon and Hoseander (or Oslander), were despatched from England in 1612 under a Captain Best, and since those days under slightly varying titles and of various strengths the Government in India have always maintained a sea service.

The periods and titles have been as follows:—

Hon. E. I. Co.'s Marine	..	1612—1686
Bombay	..	1686—1830
Indian Navy	..	1830—1863
Bombay Marine	..	1863—1877
H. M. Indian Marine	..	1877—1892

Royal Indian Marine .. 1892, Present day.

The Marine has always been most closely connected with Bombay, and in 1668 when

the E. India Co. took over Bombay, Captain Young of the Marine was appointed Deputy-Governor. From then until 1877 the Marine was under the Government of Bombay, and although from that date all the Marine Establishments were amalgamated into an Imperial Marine under the Government of India, Bombay has continued to be the headquarters and the official residence of the Director.

## War Service of the Marine.

1612-1717. Continuous wars against Dutch, Portuguese and Pirates for supremacy of West Coast of India. 1744 War with France, capture of Chaudernagore, and French ship Indienne. In 1756 Capture of Castle of Gherla, 1774 Malratta War, capture of Tannah. Latter part of the eighteenth century, war with French and Dutch, Capture of Pondicherry. Trincomalee, Jafnapatam, Colombo, etc. 1801 Egyptian campaign under Sir Ralph Abercrombie. 1803 War with France. 1810 Taking of Mauritius and capture of French ship in Port Louis. Early part of the nineteenth century suppression of Jowasmi Pirates in the Persian Gulf. 1811 Conquest of

Tara. 1813 Expedition against Sultan of Bamar. 1817-18 Mahratta War, capture of Forts at Severndroog. 1819 Expedition to exterminate piracy in the Persian Gulf. 1820 Capture of Mocha. 1821 Expedition against the Beni-koo-Ali Arabs. 1824-26 First Burma War. 1827 Blockade of Berbera and Somali Coast. 1835 Defeat of Beni Yas Pirater. 1838 Expedition to Afghanistan and capture of Karachi. 1838 Capture of Aden. 1840-42 War in China. 1843 Scinde War Battle of Meanee, capture of Hyderabad. 1845-46 Maori war in New Zealand. 1848-49 War in Punjab, siege of Mooltan. 1852 Second Burma War, Capture of Rangoon, Martaban, Bassein, Prome and Pegu. 1855 Persian War, capture of Bushire, Muhammerah and Ahwaz. 1856-57 War in China. 1857-59 The Indian Mutiny. 1859 Capture of the Island of Beyt. 1860 China War, Canton, Taku Forts, Fatsan and Peking. 1871 Abyssinian War. 1882 Egyptian Campaign. 1885 Egyptian Campaign. 1885 Third Burma War. 1889 Chin-Lshai Expedition. 1896 Suakin Expedition. 1897 Expedition to Imtirbe, Mombassa E. Africa. 1899-1902 S. African

War. 1900-01 Boxer Rebellion in China; relief of Peking. 1902-04 Somaliland Expedition.

### Personnel, 1915.

#### DIRECTOR.

Captain Walter Lumsden, C.V.O., C.I.E., R.N., A.-D.-C., Office Residence, Government Dock yard, Bombay.

(The Director, R.I.M., advises the Government of India on all maritime matters).

#### DEPUTY DIRECTOR.

Captain N. F. J. Wilson, R.I.M., Off. Residence, Government Dockyard, Bombay.

#### CAPTAIN SUPERINTENDENT.

Captain E. J. C. Hordern, R.I.M., Off. Residence, Marine House, Calcutta.

#### OFFICERS.

Commanders	..	..	..	33
Lieutenants and Sub-Lieutenants	..	..	..	72
Chief Engineers	..	..	..	10
Engineers and Assistant Engineers	..	..	..	75
Marine Survey	..	..	..	11

#### WARRANT OFFICERS.

Gunners	..	..	..	24
Clerks	..	..	..	20
Engine Drivers	..	..	..	20

#### PETTY OFFICERS AND MEN.

2,225 Recruited from the Ratnagiri District of the Bombay Presidency.

#### SHIPS.

Troopships	..	..	R. I. M. S. Dufferin*	.. 6315 tons	.. 10,191 Horse Power.	
"	..	..	" Hardinge*	.. 5467 "	.. 9,366 "	
"	..	..	" Northbrook.*	.. 5048 "	.. 7,249 "	
Light-house Tender	..	..	" Neorathus	.. 491 "	.. 753 "	Persian G.
Station Ship	..	..	" Dalhousie*	.. 1524 "	.. 2,202 "	Aden.
"	..	..	" Mayo	.. 1125 "	.. 2,157 "	Rangoon.
Despatch Vessel	..	..	" Lawrence*	.. 903 "	.. 1,277 "	Persian G.
Special Service	..	..	" Minto*	.. 960 "	.. 2,025 "	Persian Gulf.
Surveying Ship	..	..	" Investigator	.. 1014 "	.. 1,500 "	
"	..	..	" Palmurus	.. 299 "	.. 486 "	
Station Ship	..	..	" Sunbeam	.. 334 "	.. 70 "	(Nominal)— Port Blair.
Rivley Steamer	..	..	" Bharno	.. 172 "	.. 250 "	Burma.
"	..	..	" Sladen	.. 270 "	.. 360 "	"

\* On Special Service.

In addition to the above are 39 launches composed of special service launches, target towing tugs, powder boats, military service launches, etc.

#### Dockyards.

There are two Royal Indian Marine Dockyards at Bombay and at Calcutta, the former being the more important. There are 5 graving docks and a wet basin at Bombay, together with factories which enables the whole of the repairs for the ships of the East India Squadron of the Royal Navy and for the ships of the Royal Indian Marine and local Governments to be carried out, and tugs, lightships, pilot schooners, launches, etc., constructed.

#### PRINCIPAL OFFICERS, BOMBAY DOCK YARD.

R. I. M. Officers.

Superintendent, Comdr. C. W. Ramsay, R.I.M.  
Inspector of Machinery, Chief Engineer  
T. H. Knight, R.I.M.

#### CIVILIAN OFFICERS.

Chief Constructor, Mr. T. Avery, C.I.E.  
Constructor, Mr. D. H. North.

#### PRINCIPAL OFFICERS, CALCUTTA DOCKYARD.

R. I. M. Officers.

Staff Officer, Commander R. G. Strong, R.I.M.  
Inspector of Machinery, Chief Engineer  
J. Lush, R.I.M.

#### CIVIL OFFICERS.

Constructor, Mr. G. P. Newnham.

#### Appointments.

In addition to the regular appointments in the ships of the Royal Indian Marine, and in the R. I. M. Dockyards, the following appointments under local Governments are held by officers in the Royal Indian Marine:—

**BOMBAY.**

Port Officer, Assistant Port Officer, 1st Engineer and Ship Wright Surveyor and 2nd and 3rd Engineers and shipwright surveyors to the Government of Bombay.

**CALCUTTA.**

Port Officer, Deputy Port Officer and Assistant Port Officer, 2nd and 3rd Engineers and shipwright surveyors to the Government of Bengal.

**BURMA.**

Principal Port Officer, Burma, First Assistant Port Officer, Rangoon. Engineer and shipwright surveyor to Government of Burma.  
Assistant. Do. do. do. do.

Port Officer, Akyab, Moulmein and Bassein. Marine Transport Officer, Mandalay, and Superintending Engineer, Mandalay.

**MADRAS.**

Presidency Port Officer and Deputy Conservator of the Port.

**CHITTAGONG.**

Port Officer, and Engineer and Shipwright Surveyor.

ADEN.—Port Officer.

KARACHI.—Port Officer.

PORT BLAIR.—Engineer and Harbour Master.

**Expenditure.**

Recent expenditure on the Royal Indian Marine under all heads has been :—

1913-14	..	..	..	..	£ 512,845
1914-15	..	..	..	..	£ 463,370
1915-16	..	..	..	..	£ 519,100
1916-17 (Estimate)	..	..	..	..	£ 707,600

Against this were receipts, from Dockyards, for outside work done, and from sales of vessels, stores, etc, which amounted in 1913-14 to £ 89,542 and in 1914-15 to £ 89,200 so that the actual cost to the State for the whole service was :—

1913-1914	..	..	..	..	£ 423,303
1914-1915	..	..	..	..	£ 265,255
1915-1916	..	..	..	..	£ 325,400
1916-17 (Estimate)	..	..	..	..	£ 525,100

**THE NICHOLSON COMMITTEE.**

The Earl of Crewe (Secretary of State for India) announced in the House of Lords on November 2, 1911, that the Government of India was conducting an inquiry into the various departments, with the view of seeing what economies might be effected, and in that operation the Department of the Army was properly included, but there would be no sacrifice of the safety of India or any risk in maintaining order. They had been asked by the Government that they should be assisted in making an inquiry into the whole military position by a Committee over which Field-Marshal Sir W. Nicholson would preside.

The Committee met in Simla in May 1912, consisting of :—F. M. Sir W. (afterwards Lord) Nicholson ; Lt. General Sir Percy Lake, Chief of the General Staff in India ; Lt.-Gen. Sir Robert Scallan, Indian Army ; and Sir William Meyer, Chief Secretary to the Government of Madras (now Finance Member of Council). The Committee were instructed by their terms of reference :—First, to carry out a comprehensive survey of the various circumstances requiring the use of Military Force which may arise out of the external or internal situation in India under the conditions which now exist or may probably arise during the next few years. Secondly,

to consider and report on the numbers and constitution of the armed force which should be maintained in India to meet these obligations. Thirdly, to consider and report whether any, and if so, what measures for the reduction of Military expenditure are compatible with the efficient maintenance of that force. Its deliberations, which were private, continued until Lord Nicholson left India in April, 1913, and it was announced in the House of Commons that the Committee's report would not be published. According to the Military correspondent of *The Times* (June 2, 1913) it has "been known for some time past that a division of opinion has taken place within the Committee. Lord Nicholson and Sir William Meyer have signed what must be called by courtesy a majority report, because the distinguished Field-Marshal was given the invidious advantage of a casting vote. But Sir Percy Lake and Sir Robert Scallan are credited with having taken strong exception to many of the proposals made by their colleagues, and will doubtless draft a minority report." During a discussion in the Imperial Legislative Council on January 14th, 1914, it was officially stated that the report would not be published. Any action on the conclusions of the Committee is necessarily held in abeyance during the War.

## Finance.

The influence of the war on Indian finance is an exceedingly interesting study. For many years there has been some consideration of the probable fate of the Indian currency system, as set up in 1898, under the stress of war, one school arguing that no currency system could be expected to withstand the shock of war, and the other that it is prudent to be prepared for war conditions as well as those of peace. In some respects the **economic condition of India** in the face of war is one of very great strength. Being in the main an agricultural country, where 67 per cent. of the population still derive their living from the soil, without any fine or elaborate credit system, it is less susceptible to the shock of war than the highly organised credit institutions of the West. On the other hand, it betrays a certain evidence of weakness. Whilst the population has not known the real terror of war, it still lives under the tradition of wars which meant universal spoliation and confiscation. The Government has large commitments to meet in London every year on account of the interest on debt and other liabilities, averaging between £18 to £20 millions per annum. This necessitates the maintenance of a strongly favourable balance of trade and much of this trade in raw products was done with the Continent of Europe, and in particular with Germany, Austro-Hungary and Belgium. There is a very large token currency, chiefly consisting of silver rupees which, in so far as they are presented for the purposes of remittances abroad must be met in gold; and the reserve for this purpose has been locked up to an unfortunate extent in securities which are not liquid in time of war. There is in addition a very large note issue.

**Government Debts.**—Then again the Government has been a large borrower from the general public through the medium of the Post Office Savings Banks and against this heavy liability it holds no reserve whatsoever. A further source of embarrassment to the Government is that the banking institutions of India are so indifferently developed that the market cannot be relied upon to support Government in time of emergency. On the other hand, the Government is expected to support the money market not only by its guarantee, but with actual cash taken from the Treasuries. One other factor of supreme importance is the character of the monsoon. Every Indian budget is to a very large extent a **gamble in rain** and if the season's rainfall is inadequate, or as has been the case on so many occasions completely fails, the resources of Government are very seriously impaired.

**First effects of War.**—The first effects of the war were very much as anticipated. There was an immediate demand for the remittance of funds from India to London in excess of the capacity of the usual channels. It had always been understood that in such times the Government of India would come to the relief of the money market by selling gold bills on London, or **Reverse Councils** as they are now called, at gold point, but owing to the delay that had taken place in dealing with the non-controversial recommendations of the Currency

Commission (q. v.) the details had not been settled by the India Office. These were soon adjusted and Bills to the extent of £ 8½ millions were sold. These Bills are met on demand in London from the funds of the Gold Standard Reserve (q. v.), and amount in practice to the transfer of an equivalent amount of the Reserve from gold in London to rupees in India. This was a blessing in disguise for the Government had immediately to face a serious **rush on the Post Office Savings Banks**. These amounted to £7 millions. Government ordinarily maintain no reserve against this unfunded debt, and there is no possibility at such times of drawing largely upon the banks, which are looking for help from the Treasuries rather than preparing to finance Government. So the emergency was met by borrowing from the Gold Standard Reserve transferred to India through the sale of Reverse Councils. There was also a certain demand for the encashment of currency notes; but this was met by increasing the facilities for encashment, not restricting them; confidence was soon restored, but not until the **note circulation** had been reduced by Rs 7 crores or £ 4½ millions. There was also a rush by speculators to raid the gold reserves of the Government but this was arrested, after the issue of £1·8 millions, by an embargo on the issue of gold for any non-Government purpose. Trade was for a time seriously dislocated and the position was aggravated by the disappearance of the Marwari middlemen who fled to their homes in Rajputana, and the temporary ravages of the Emden in the Indian Ocean.

**Loans or Taxes.**—These factors reflected in the Budget of 1914-15—the Indian financial year closes on March 31st—produced a deficit of £4,959,000. The most rigid economy failed to balance the Budget estimates for 1915-16 by £3,833,000. The Government had therefore to decide whether they would meet the actual and prospective deficits by borrowing or by the imposition of fresh taxation. They speculated on the assumption that the war would be over before the close of the year, and decided to meet the deficits by temporary and permanent borrowing. For this they had justification. In the past, it has been the practice of the Government of India to use their surpluses largely for the avoidance of debt for the construction of reproductive works, and at the same time to meet any deficit not by temporary borrowing, but by additional taxation; it was therefore only an act of justice to meet what was expected to be a temporary war deficit by borrowing. Government therefore proposed to continue the loan of £7 millions from the Gold Standard Reserve, to renew the £7 millions of floating debt in London, to borrow £3 millions in India and £6½ millions in London. In these ways they expected to maintain a fair scale of expenditure and a reasonable outlay on reproductive works without recourse to fresh taxation. With this brief summary of the special conditions we can proceed to consider the actual budget statement but for its full understanding it is necessary to indicate the general considerations which give a special character to Indian finance.



**Financial Characteristics.**—Three important facts have to be borne in mind in considering the finances of India. The first is that the Budget of the Government of India includes also the transactions of the Local Governments, and that the revenues enjoyed by the latter are mainly derived from sources which they share with the Central Government. The principles underlying the relations of the supreme with the local governments are explained in the chapter dealing with this question. Generally speaking, certain heads of revenue are divided equally between the provinces and the Imperial Government, and certain heads are enjoyed entirely by the local governments. These vary with different provinces, but broadly it may be said that the divided heads are land revenue, excise, stamps, income-tax and the in-comings from the large irrigation works. The Provincial Governments take the whole of the receipts under forests and registration, and the income of the spending departments which they manage, such as ordinary public works, police, education, medical, courts and jails. The Government of India take the whole of the revenue accruing from the export of opium, salt, customs, mint, railways, posts and telegraphs, military receipts and tribute from Native States. As regards the expenditure, the Government of India are mainly responsible for the outlay relating to defence, railways, posts and telegraphs, interest on debt and home charges; and the provinces for charges connected with land revenue and general administration, forests, police, courts and jails, education and medical, whilst charges for irrigation and ordinary public works are common to both Imperial and Provincial. The second point is that a very large proportion of the revenue of the

Government of India is derived not from taxation but from great State enterprises. It may be taken roughly that nearly two-thirds of the gross revenue is derived from sources other than taxation, such as the land revenue, opium, forests, tribute from Native States, posts and telegraphs, railways and irrigation. The third point is that the Secretary of State for India enters into very large financial transactions on behalf of the Indian Government in order to meet what are generically known as the Home Charges. These amount now to some eighteen millions sterling and are met by the Secretary of State selling for gold drafts in rupees on the Indian Treasuries known as the Council Bills or telegraphic transfers. These Home Charges were for many years erroneously described as a "drain" on India. A large proportion however goes to defray the interest on the sterling debt and the outlay on the purchase of stores and railway materials which cannot be acquired in India. The only part of the Home Charges which by any stretch of the imagination can be termed a "drain" is that which stands for civil and military officers on leave or pension, and here it is now recognised that India receives exceedingly good value for services rendered. One supplementary point which needs consideration is that the finances of India were artificially inflated for several years by the unusual opium receipts. The Government of India used to sell opium for export to China or the right of exporting opium to China and in view of the approaching end of this trade inflated prices were given for opium for export. This led to large windfall surpluses which for several years made the Government finances appear more prosperous than they really are.

### Twelve Years' Finance.

We may now turn to the financial results of the last ten years in pounds sterling.

—	Revenue.	Expenditure.	Surplus.	—	Revenue	Expenditure.	Surplus.
	£	£	£		£	£	£
1905-6 ..	70,800,000	68,700,000	2,100,000	1911-12 ..	82,835,750	78,895,416	3,940,334
1906-7 ..	73,100,000	71,500,000	1,600,000	1912-13 ..	86,985,300	83,623,400	3,361,900
1907-8 ..	71,900,000	70,700,000	300,000	1913-14 ..	84,262,000	83,675,000	587,000
1908-9 ..	69,800,000	73,500,000	*3,700,000	1914-15 ..	86,156,000	85,115,000	*4,959,000
1909-10 ..	74,600,000	74,000,000	600,000	1915-16 ..	82,620,000	85,204,000	*2,644,000
1910-11 ..	80,300,000	76,900,000	3,400,000	1916-17 ..	86,199,000	85,512,000	687,000

\* Deficit.

**Provincial and Imperial.**—At this stage one point should be made clear. Study of the figures often reveals a baffling discrepancy between "Imperial" and "Imperial"-cum-Provincial balances. This arises from the intermingling of Provincial with Imperial finance. During the halcyon years when large surpluses accrued to the treasury from the opium surpluses and the general prosperity of the country, the Government did not reduce taxation, but devoted these surpluses in part to the extinction of floating debt and the avoidance of further debt

by financing public works from revenue; and in part to large grants to the Local Governments for ameliorative works, chiefly in improving education and sanitation. But the spending of this money involved long preparation, with the result that the Local Government accumulated very large balances in excess of the normal. As these plans have matured, the Local Governments are ready to draw on the accumulations. It is estimated in the current year, for example, that they will reduce the balances by no less than £ 365,000.

**Fresh Taxation.**—The Budget of 1915-16 having been based on the assumption that the war would be over before the close of the financial year, it was obvious that fresh taxation would be necessary to meet the conditions arising out of the prolongation of hostilities. Moreover there were certain adverse circumstances in the year. The monsoon rains were not good. The Customs revenue showed a certain decline. The railway receipts were good; this has now become an important head in the Indian budget, whereas in past years the railways did not pay interest charges; the larger revenue arose in part from a brisk internal trade and in part from the substitution of rail-borne for sea-borne coal from Bengal to the chief consuming centres. The borrowing programme was interrupted. In the Budget, the Secretary of State calculated on borrowing £64 millions; in practice he raised only £31 millions. Rigid economy was exercised in the capital programme; for instance the railway budget was reduced from £8 million to £4·6 millions, and the expenditure on irrigation was cut down from £11 million to £9 million. The military expenditure was also much heavier than was anticipated. Whilst therefore the budgeted revenue rose from £80·4 millions to £82·62 millions and the expenditure from £84·435 millions to £85·204 millions, the deficit was £2·644 millions. On a cautious estimate of revenue and expenditure with the existing scale of taxation the close of the financial year 1916-17—March 31st, 1917—would have found the State with a further deficit of £2·90 millions. Reference has been made to the fact that in India in time of crisis the State is a lender rather than a borrower; also to the fact that there was a large temporary debt—£7 millions in London and a like sum in India. It was therefore of the first importance to impose new taxation and to discharge as much temporary debt as possible.

**The New Taxes.**—The new taxes took the general form of an addition to the tariff. It is explained in the section on Customs (*q. v.*) that the Indian tariff is one for revenue purposes, that it is based on a general import duty of five per cent. with a special tariff of three and a half per cent. on cotton piece-goods and a large free list. The Budget raised the general tariff to seven and a half per cent., except in the case of sugar, which was raised to ten per cent. The

free list was also reduced and special tariffs arranged for wines and spirits and tobacco. To this general rule, however, one important exception was made: the import duty on piece-goods stood at the old figure of three and a half per cent. These additions were estimated to produce £410,000. Export duties were also imposed on two flourishing staples, tea to the extent of Rs. 1-8-0 per 100 lbs., raw jute Rs. 2-4-0 per bale of 400 lbs., equivalent to five per cent., and in the case of manufactured jute Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians. The whole yield from the revision of the tariff was put at £2·1 millions. The salt tax had been steadily reduced from Rs. 2-8-0 per maund of 82 lbs. to Re. 1; as this has always been reckoned a war tax, an addition of four annas a maund to the duty was made, estimated to yield £800,000. The income-tax was also revised and further graduated. Under the old schedule incomes of Rs. 1,000 and under were exempt. Incomes above that figure paid either four or five ples in the rupee; roughly speaking the income-tax may be taken as five ples in the rupee or six pence in the pound. The new proposals left all incomes of Rs. 5,000 and under untouched. Incomes of Rs. 5,000 to Rs. 9,999 were charged six ples or seven pence halfpenny in the pound; incomes of Rs. 10,000 to Rs. 24,999, nine ples in the rupee or eleven pence farthing in the pound; and incomes of Rs. 25,000 and upwards one anna in the rupee or one and three pence in the pound. Profits on companies were charged the anna rate.

**Financial Effect.**—To sum up the financial effect of the proposals above explained, Government aimed at an additional revenue of—

- £2,150,000 from Customs and consequential changes in the excise duties on liquors.
- £800,000 by an enhancement of the duty on Salt.
- £900,000 by an increase under Income Tax.

Or in all a little over £3·6 millions as against an estimated Imperial deficit of £2·6 millions. This leaves an Imperial surplus of £1,052,000 which, though somewhat less than aimed at in the years just preceding the war, supplied a useful and much needed source of strength against contingencies.

[In Millions of £]

	Revised, 1915-16.			Budget, 1916-1917.		
	Imperial.	Provincial.	Total.	Imperial.	Provincial.	Total.
Revenue .. ..	51'982	30'638	82'620	55'651	30'548	86'199
Expenditure .. ..	53'968	31'296	85'264	54'599	30'913	85'512
Surplus or Deficit— ..	—1'986	—'658	—2'644	+1'052	—'365	+·687

**Reception of the Budget.**—The debate on the Budget will be found summarised in the section on the work of the Imperial Legislative Council (q.v.); on the whole it was generally favourable. There was some criticism of the provision of a surplus, it being argued that it was not fair to impose additional taxation for the purpose of accumulating a surplus. On the other hand, it has to be remembered that the Indian Budget is a gamble in rain and that it would have been imprudent in such a year for Government to leave it self short of funds. The chief controversy raged over the decision to leave the import duties on imported textiles untouched. This raised in an acute form one of the sores in Indian economics—the differential treatment meted out to imported textiles in deference to the Lancashire vote, and the imposition of an excise on cotton goods woven

in India; this is fully explained in the section on the Indian Cotton Duties (q.v.). The view of the Government of India was that the import duties should be raised and the excise left untouched; this was rejected by the Secretary of State on the ground that it raised a highly controversial issue and that the subject as a whole should be considered after the war; whilst this naturally caused great disappointment, it was recognised that the excise must be considered as a question of principle, and that the excise and the import duties form a component whole. With the exception of these criticisms the Budget was received with great favour and as a fair adjustment of the new burdens; never before in the history of India have three and a half millions of additional taxation been imposed with so little opposition.

**Borrowing programme.**—From what has gone before it will be appreciated that one of the most important sections of the Indian Budget is that which deals with Ways and Means. The Government of India not only finances the railway and irrigation works, which make it a constant borrower, but undertakes the bulk of the remittance business between India and London. When the optimistic budget of 1915-16 was framed, the Government hoped to maintain their scale of capital expenditure at a fairly high rate, and to spend £8 millions on railways. But the London borrowings had to be reduced by more than a half, and the railway expenditure was rigorously pruned. The Ways and Means sections of the Budget of 1916-17 was therefore framed on a much more modest scale. The actual figures were as follows:—

Outlay.	£ million.	Resources.	£ million.
Provincial deficit .. .. .	0·4	From balances .. .. .	0·3
Capital Expenditure—		Imperial surplus .. .. .	1·1
Railway .. .. .	3·0	Rupee borrowing .. .. .	4·3
Irrigation .. .. .	0·9	Unfunded debt .. .. .	0·3
Delhi .. .. .	0·3	Famine insurance and miscellaneous items .. .. .	0·2
Discharge of debt .. .. .	2·0	Special war receipts .. .. .	0·4
	6·6		6·6

**Debt Conversion.**—The rupee borrowing programme was the largest in the history of India. In issuing this loan the Government had two points to consider; first there was the provision of the necessary funds; next there was the depreciation of the existing Government securities, which consist for the most part of three and a half per cent. paper. The Government were urged to convert the whole of their rupee borrowings into four per cent., in order to prevent the loss to their prestige and borrowing power arising from the depreciation of the securities. This obligation they refused to undertake. They however agreed that subscribers to the new loan, which carried interest at four per cent. and was redeemable in ten or fifteen years at the option of Government, should have the option of converting an equivalent amount of three and a half per cent. or three per cent. paper, at a rate to be fixed, and that the same offer should remain open for the following two years in regard to any Government borrowings. The conversion rate was fixed after a conference between the Finance Department and the banking interests in Bombay

in April, at 91. The prospectus of the loan was issued in June. Government fixed the amount of the loan at six crores, but announced that they were prepared to receive tenders up to twelve crores. The twelve crores limit was fixed on this principle. It was estimated that twelve crores of rupees was the largest sum available for investment in first class securities in India in any one year; consequently that their offer amounted in practice to the offer of unlimited conversion. The prospects of the loan were prejudiced in some respects by the announcement on the eve of the issue of the prospectus that the British five per cent. Exchange Bonds would be free of income tax; substantial sums of Indian money were invested in this security. The loan actually yielded Rs. 635 lakhs—£1·22 millions—irrespective of the sum subscribed through the Post Office Savings Banks—Rs 82 lakhs or £216,645. The subscription provided all the funds required to carry on the business of Government, although a larger subscription would have been useful in order to repay the debt due to the Gold Standard Reserve.

**Military Services.**—Reference has been made to the increased military charges which exercised an important influence on the Budget. The actual figures for the past five years are set out in the following table:—

—	Gross.					Net, i.e., Deduct- ing Receipts.
	Army.	Marine.	Military Works.	Special Defences.	Total.	All Military heads.
	£	£	£	£	£	£
1912-13 . . . . .	10,576,526	479,928	887,379	9,267	20,953,100	19,565,466
1913-14 . . . . .	10,799,239	512,845	947,297	16,384	21,265,765	19,896,113
1914-15 . . . . .	20,336,559	463,370	996,071	13,603	21,809,603	20,434,915
1915-16 (Revised) . .	21,650,200	519,100	830,200	16,300	23,015,800	21,842,700
1916-17 (Budget) . .	21,579,100	707,600	858,300	20,900	23,165,900	22,000,000

The increased expenditure was entailed by the charges necessary to bring India abreast of the needs revealed by the war and to improve conditions on the Frontier.

**India and the War.**—In view of the discussion of the part which India is taking in the prosecution of the war, the following extracts from the speech of the Finance Member in introducing the Budget are illuminating.

"The Indian Armies still continues to play a conspicuous part, side by side with representatives of every portion of the Empire, in the great war which the King Emperor and his Allies are waging for the cause of liberty and right. Nor is this the only respect in which India has borne her share of the Empire's burdens. She has rendered invaluable aid by recruiting and training large numbers of soldiers; by furnishing supplies of all sorts—foodstuffs, clothing, ordnance, equipment and munitions; by training and despatching courses; by lending to the Admiralty a great part of her Royal Indian Marine Fleet; and by fitting out transports. The total value of the supplies and services of all sorts, which she has thus undertaken on behalf of the War Office amounted, including some similar expenditure brought to account at home, to about £10 million in 1914-15 and is estimated at about £18 millions in 1915-16 and £20½ millions in 1916-17. These figures include also the outlay on civil departments on the manufacture of munitions which is now in full progress. They do not, however, include the services representing a recoverable outlay of

£850,000. in 1915-16, and about £1 million in 1916-17, which we are able to render to the Australian Government.

The assistance given by the Indian Princes in special gifts towards the cost of the war now totals about £900,000. Further, considerable sums have been placed at the disposal of the Commander-in-Chief to be spent in the purchase of horses, motor-cars, motor ambulances, etc., or in any way which His Excellency may think advisable for the good of the Army."

**Provincial Finance.**—Reference has already been made to the influence of Provincial Finance on the Imperial Budget. During the halcyon days when money flowed into the Imperial Exchequer from the opium surpluses, large grants were made to the Provincial Governments for expenditure on education and irrigation and kindred objects. All this could not be spent at once; careful programmes had to be prepared and capital expenditure had to be co-ordinated with charges for maintenance. The result was the accumulation of large balances—held by the Government of India but at the disposal of the Provincial Governments—which if normal times had continued would have been rapidly expended by the Provincial Governments as their plans matured. But when the prolongation of the war was seen to be inevitable, the regime of strict economy was naturally extended to the Provinces and an embargo on all non-urgent expenditure imposed. Even in the current financial year, however, the Provinces are to over-spend their income by £865,000, reducing the Imperial surplus from £1'05 millions to £687,000.

The actual financial condition of the Provinces in regard to these grants is shown by the following table:—

[In thousands of £.]

	Total Grants given (1911-12 to 1916-17).	Total Expenditure incurred (1911-12 to 1916-17).	Balance expected to be available on 1st April 1917.
	Re-curring.	Non-re-curring.	Non-re-curring.
1) Education .. .. .	763	3,253	2,213
(2) Sanitation .. .. .	245	1,738	1,172
(3) Medical Relief, etc. .. .. .	..	58	54
(4) Agriculture, etc. .. .. .	..	177	169
(5) Grants for other special purposes .. .. .	..	1,545	1,415
6) Grants for general purposes—Discretionary grants .. .. .	..	667	381
Tota ..	1,008	7,438	5,404
Add—Savings on recurring grants during foregoing period (about) .. .. .	..	..	697
Total amount expected to be available from special grants on the 1st April 1917 .. .. .	..	..	2,731

**Railways.**—This is a question which properly belongs to the railway heading (*q.v.*) but inasmuch as since the disappearance of the profits from the opium trade with China the railway profits have come bulk largely in the budget, they may be indicated here. The financial aspect of the railway property of the Government of India for the past five years is indicated in the following table:—

(In thousands of £.)

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17. (Budget)
Capital at charge at end of each year ..	340,103	351,302	361,550	365,097	366,827
Net working profit from railways excluding interest charges .. .. .	17,272	17,016	15,612	17,123	16,461
Percentage of net working profit to capital outlay .. .. .	5'08	5'01	4'32	4'69	4'49
Net working profit from railways after meeting interest charges .. .. .	4,803	4,790	2,158	3,348	2,505
Percentage to capital outlay of net profits after meeting interest charges .. .. .	1'41	1'36	'69	'92	'63

The disadvantage of the railway head is that it still further makes the finances of India dependent on the character of the monsoon. Railway profits entirely hinge on trade, and this hinges on the rainfall, whereas the opium surplus was largely independent of the character of the monsoon.

**REFERENCES.**—The Indian Budget (*Gazette of India*), India, its Administration and Progress (Macmillan) By Strachey. India and the Durbar (Finance, By Sir William Meyer) Murray.

The details of the budget are set out in the following table. As the manner in which the principal heads of income like land revenue, railways, irrigation and customs are realised is described in separate articles (q. v.) they need not detain us here.

REVENUE.	Accounts, 1914-1915.	Revised Estimate, 1915-1916.	Budget Estimate, 1916-1917.
<b>Principal Heads of Revenue—</b>	<b>£</b>	<b>£</b>	<b>£</b>
Land Revenue .. .. .	21,221,539	21,734,900	21,932,100
Opium .. .. .	1,572,218	1,881,200	2,286,900
Salt .. .. .	3,910,790	3,490,500	3,987,000
Stamps .. .. .	5,082,043	5,387,800	5,457,200
Excise .. .. .	8,856,831	8,532,900	8,538,000
Customs .. .. .	6,347,201	5,747,900	7,698,000
Other Heads .. .. .	5,151,321	5,178,300	6,107,400
<b>TOTAL PRINCIPAL HEADS ..</b>	<b>52,141,993</b>	<b>51,958,500</b>	<b>56,007,200</b>
Interest .. .. .	1,023,307	1,076,000	1,155,300
Post and Telegraphs .. .. .	3,696,973	3,784,800	3,876,000
Post .. .. .	69,498	74,000	72,000
Receipts by Civil Departments .. .. .	1,505,120	1,546,300	1,549,900
Miscellaneous .. .. .	677,760	645,100	565,100
Railways: Net Receipts .. .. .	15,799,149	17,339,300	16,721,700
Irrigation .. .. .	4,680,969	4,759,800	4,815,000
Other Public Works .. .. .	288,219	288,500	269,700
Military Receipts .. .. .	1,374,688	1,173,100	1,165,900
<b>TOTAL REVENUE ..</b>	<b>81,157,666</b>	<b>82,620,400</b>	<b>86,199,600</b>
<b>DEFICIT ..</b>	<b>1,785,270</b>	<b>1,086,100</b>	<b>....</b>
<b>TOTAL ..</b>	<b>82,942,936</b>	<b>81,606,500</b>	<b>86,199,600</b>
<b>EXPENDITURE.</b>			
Direct Demands on the Revenues .. .. .	8,939,330	9,383,100	9,450,600
Interest .. .. .	1,191,257	1,185,400	989,700
Post and Telegraphs .. .. .	3,257,283	3,221,000	3,503,500
Post .. .. .	141,682	86,000	90,300
Salaries and Expenses of Civil Departments .. .. .	18,909,977	19,067,000	19,323,300
Miscellaneous Civil Charges .. .. .	5,311,384	5,131,200	5,283,300
Famine Relief and Insurance .. .. .	1,000,000	1,000,000	1,000,000
Railways: Interest and Miscellaneous Charges .. .. .	13,641,115	13,990,800	14,217,100
Irrigation .. .. .	3,754,268	3,769,800	3,770,900
Other Public Works .. .. .	7,177,209	5,464,200	4,717,500
Military Services .. .. .	21,809,603	23,015,800	23,165,900
<b>TOTAL EXPENDITURE, IMPERIAL AND PROVINCIAL .. .. .</b>	<b>85,133,088</b>	<b>85,263,800</b>	<b>85,512,100</b>
<i>Add—Provincial Surpluses, that is, portion of allotments to Provincial Govern- ments not spent by them in the year.</i>	<i>....</i>	<i>46,800</i>	<i>17,100</i>
<i>Deduct—Provincial Deficits, that is, portion of Provincial Expenditure defrayed from Provincial Balances .. .. .</i>	<i>2,190,152</i>	<i>704,100</i>	<i>382,000</i>
<b>TOTAL EXPENDITURE CHARGED TO REVENUE SURPLUS ..</b>	<b>82,942,936</b>	<b>84,606,500</b>	<b>85,147,200</b>
<b>TOTAL ..</b>	<b>82,942,936</b>	<b>84,606,500</b>	<b>86,199,600</b>

## THE LAND REVENUE.

The principle underlying the Land Revenue system in India has operated from time immemorial. It may be roughly formulated thus—the Government is the supreme landlord and the revenue derived from the land is equivalent to rent. On strictly theoretical grounds, exception may be taken to this statement of the case. It serves, however, as a substantially correct description of the relation between the Government and the cultivator. The former gives protection and legal security. The latter pays for it according to the value of his holding. The official term for the method by which the Land Revenue is determined is "Settlement." There are two kinds of settlement in India—Permanent and Temporary. Under the former the amount of revenue has been fixed in perpetuity, and is payable by the landlord as distinguished from the actual cultivator. The Permanent Settlement was introduced into India by Lord Cornwallis at the close of the eighteenth century. It had the effect intended of converting a number of large-revenue farmers in Bengal into landlords occupying a similar status to that of landowners in Europe. The actual cultivators became the tenants of the landlords. While the latter became solely responsible for the payment of the revenue, the former lost the advantage of holding from the State. This system has prevailed in Bengal since 1795 and in the greater part of Oudh since 1859. It also obtains in certain districts of Madras.

## Temporary Settlements.

Elsewhere the system of Temporary Settlements is in operation. At intervals of thirty years, more or less, the land in a given district is subjected to a thorough economic survey, on the basis of the trigonometrical and topographic surveys carried out by the Survey Department of the Government of India. Each village area, wherever the Temporary Settlement is in vogue, has been carefully mapped, property-boundaries accurately delineated, and records of rights made and preserved. Under the Permanent Settlement in Bengal the occupant does not enjoy these advantages. The duty of assessing the revenue of a district is entrusted to Settlement Officers, members of the Indian Civil Service specially delegated for this work. The duties of a Settlement Officer are thus described in Strachey's *India* (revised edition, 1911):—"He has to determine the amount of the Government demand, and to make a record of all existing rights and responsibilities in the land. He has a staff of experienced subordinates, almost all of whom are natives of the country, and the settlement of the district assigned to him is a work which formerly required several years of constant work. The establishment of agricultural departments and other reforms have however led to much simplification of the Settlement Officer's proceedings, and to much greater rapidity in the completion of the Settlements. All the work of the settlement officer is liable to the supervision of superior officers, the assessments proposed by him require the sanction of the Government before they become finally binding; and his judicial decisions may be reviewed by the Civil Courts. It is the duty

of the settlement officer to make a record of every right which may form the subject of future dispute, whether affecting the interests of the State or of the people. The intention is to alter nothing, but to maintain and place on record that which exists."

## The Two Tenures.

Under the Temporary Settlement land tenures fall into two classes—peasant-holdings and landlord-holdings, or *Ryotwari* and *Zemindari* tenures. Broadly speaking, the difference between the two in a fiscal sense is that in *Ryotwari* tracts the *ryot* or cultivator pays the revenue direct; in *Zemindari* tracts the landlord pays on a rental assessment. In the case of the former, however, there are two kinds of *Ryotwari* holdings—those in which each individual occupant holds directly from Government, and those in which the land is held by village communities, the heads of the village being responsible for the payment of revenue on the whole village area. This latter system prevails in the North. In Madras, Bombay, Burma and Assam, *ryotwari* tenure is on an individual basis, and the Government enters into a separate agreement with every single occupant. The basis of assessment on all classes of holdings is now more favourable to the cultivator than it used to be. Formerly what was believed to be a fair average sum was levied on the anticipated yield of the land during the ensuing period of settlement. Now the actual yield at the time of assessment alone is considered, so that the cultivator gets the whole of the benefit of improvements in his holding subsequently brought about either by his own enterprise or by "unearned increment." The Government, however, may at a new settlement re-classify a holding so as to secure for itself a fair share in an increment that may have resulted from public works in the vicinity, such as canals and railways, or from a general enhancement of values. But the principle that improvements effected by private enterprise shall be exempt from assessment is now accepted by the Government and provided for in definite rules.

## Incidence of the Revenue.

The incidence of the revenue charges varies according to the nature of the settlement, the class of tenure, and the character and circumstances of the holding. Under the Permanent Settlement in Bengal Government derive rather less than £3,000,000 from a total rental estimated at £12,000,000. Under Temporary Settlements, 50 per cent. of the rental in the case of *Zemindari* land may be regarded as virtually a maximum demand. In some parts the impost falls as low as 35 and even 25 per cent. and only rarely is the proportion of one-half the rental exceeded. In regard to *Ryotwari* tracts it is impossible to give any figure that would be generally representative of the Government's share. But one-fifth of the gross produce is the extreme limit, below which the incidence of the revenue charge varies greatly. About twelve years ago the Government of India were invited in an influential signed memorial to fix one-fifth of the gross produce as the maximum Government

mand. In reply to this memorial and other representations the Government of India (Lord Curzon being Viceroy) issued a Resolution in defence of their Land Revenue Policy. In it it was stated that "under the existing practice the Government is already taking much less in revenue than it is now invited to exact" and "the average rate is everywhere on the down grade." This Resolution, together with the statements of Provincial Governments on which it was based, was published in a volume; it is still the authoritative exposition of the principles controlling the Land Revenue Policy of the Government of India. A series of propositions claimed to be established by this Resolution the following points are noted:—(1) In *Zemindari* tracts progressive moderation is the key-note of the Government's policy, and the standard of 50 per cent. of the assets is more often departed from on the side of deficiency than excess; (2) in the same areas the State does not hesitate to interfere by legislation to protect the interests of the tenants against oppression at the hands of the landlords; (3) in *Ryotwari* tracts the policy of long-term settlements is being extended, and the proceedings in connection with new settlements simplified and cheapened; (4) local-taxation (of land) as a whole is neither immoderate nor burdensome; (5) over-assessment is not, as alleged, a general or widespread source of poverty, and it cannot justly be regarded as a contributory cause of famine. At the same time the Government set down as principles for future guidance—*a*) large enhancements of revenue, when they occur, to be imposed progressively and gradually, and not *per saltum*; *b*) greater elasticity in revenue collection, suspensions and remissions being allowed according to seasonal variations and the circumstances of the people; *c*) a more general resort to reduction of assessments in cases of local deterioration.

### Protection of the Tenants.

In regard to the second of the five propositions noted above, various Acts have been passed from time to time to protect the interests of tenants against landlords, and also to give greater security to the latter in possession of their holdings. The Oudh Tenancy Act of 1886 placed important checks on enhancement of rent and eviction, and in 1900 an Act was passed enabling a landowner to oust the whole or a portion of his estate, and to place it beyond the danger of alienation by his heirs. The Punjab Land Alienation Act, passed at the instance of Lord Curzon, embodied the principle that it is the duty of a Government which derives such considerable proportion of its revenue from the land, to interfere in the interests of the cultivating classes. This Act greatly restricted the credit

of the cultivator by prohibiting the alienation of his land in payment of debt. It had the effect of arresting the process by which the Punjab peasantry were becoming the economic serfs of money-lenders. A good deal of legislation affecting land tenure has been passed from time to time in other provinces, and it has been called for more than once in Bengal, where under the Permanent Settlement (in the words of the Resolution quoted above), "so far from being generously treated by the Zemindars, the Bengal cultivator was rack-rented, impoverished, and oppressed."

### Government and Cultivator.

While the Government thus interferes between landlord and tenant in the interests of the latter, its own attitude towards the cultivator is one of generosity. Mention has already been made of the great advantage to the agricultural classes generally of the elaborate systems of Land Survey and Records of Rights carried out and maintained by Government. In the Administration Report of Bombay for 1911-12, it is stated:—"The Survey Department has cost the State from first to last many lakhs of rupees. But the outlay has been repaid over and over again. The extensions of cultivation which have occurred (by allowing cultivators to abandon unprofitable lands) have thus been profitable to the State no less than to the individual; whereas under a *Zemindari* or kindred system the State would have gained nothing, however much cultivation had extended throughout the whole of 30 years' leases." On the other hand, the system is of advantage to the *ryots* in reducing settlement operations to a minimum of time and procedure. In the collection of revenue the Government constantly pursues a generous policy. In times of distress suspensions and remissions are freely granted after proper inquiry.

The amount of gross revenue raised on the land is estimated in 1916-17 at £21,932,100 out of a total from all sources in the same year of £86,109,600. This compares very favourably with the £34,000,000 of land revenue recorded as having been raised annually from a smaller empire by Aurangzeb.

The literature of the subject is considerable. The following should be consulted by readers who require fuller information:—"Land Revenue Policy of the Indian Government," 1902 (Superintendent of Government Printing); Baden Powell's "Land Systems of British India"; Sir John Strachey's "India, its Administration and Progress, 1911," (Macmillan & Co.); M. Joseph Chailley's "Administrative Problems of British India" (Macmillan & Co., 1910), and the Annual Administration Reports of the Respective Provincial Governments.

## EXCISE.

The Excise revenue in British India is derived from the manufacture and sale of intoxicating liquors, hemp, drugs, tody and opium. It is a commonplace amongst certain sections of temperance reformers to represent the traffic in intoxicating liquors as one result of British rule. There is, however, abundant evidence to show that in pre-British days the drinking of spiri-

tuous liquors was commonly practised and was a source of revenue.

The forms of intoxicating liquor chiefly consumed are country spirit; fermented palm juice; beer made from grain; country brands of rum, brandy, etc., locally manufactured malt beer and imported wine, beer and spirits. Country spirit is



the main source of revenue, except in the Madras Presidency, and yields about two-thirds of the total receipts from liquors. It is usually prepared by distillation from the Maluva flower, molasses and other forms of unrefined sugar, fermented palm juice and rice. In Madras a very large revenue is derived from fresh toddy. The British inherited from the Native Administration either an uncontrolled Out-Still System or in some cases a crude Farming System and the first steps to bring these systems under control were the limitation of the number of shops in the area farmed, and the establishment of an Improved Out-Still System under which the combined right of manufacture and sale at a special shop was annually granted. This of course was a kind of control, but it only enabled Government to impose haphazard taxation on the liquor traffic as a whole, by means of vend fees. It did not enable Government to graduate the taxation accurately on the still-head duty principle nor to insist upon a standard of purity or a fixed strength of liquor. Moreover for political and other reasons the extent of control could not at first be complete. There were tribes of aborigines who regarded the privilege of making their own liquor in their private homes as a long established right; and who believed that liquor poured as libations to their god should be such as had been made by their own hands. The introduction of any system amongst those peoples had to be worked very cautiously. Gradually, as the Administration began to be consolidated, the numerous native pot-stills scattered all over the country under the crude arrangements then in force began to be collected into Central Government enclosures called Distilleries, thus enabling Government to perfect its control by narrowing the limits of supervision; and to regularize its taxation by imposing a direct still-head duty on every gallon issued from the Distillery. Under Distillery arrangements it has also been possible to regulate and supervise thoroughly the manufacture of liquor and its disposal subsequent to its leaving the Distillery by means of a system of transport passes, establishment supervision, improved distribution and vend arrangements.

#### Various Systems.

The Out-Still System may be taken to include all systems prior in order of development to the imposition of Still-head duty. Briefly stated the stages of development have been—First: farms of large tracts; Second: farms of smaller areas; Third: farms of the combined right to manufacture and sell at particular places without any exclusive privilege over a definite area; Fourth: farms of similar right subject to control of means and times for distilling and the like. The Provincial Governments have had to deal with the subject in different ways suited to local conditions, and so the order of development from the lower forms of systems to the higher has not been always everywhere identical in details. Yet in its essence and main features the Excise Administration in most provinces of British India has progressed on uniform lines, the key note lying in attempts, where it has not been possible to work with the fixed duty system in its simplest forms, to combine the farming and fixed duty systems with the object of secur-

ing that every gallon of spirit should bear a certain amount of taxation. The Out-Still System has in its turn been superseded by either the Free-supply system or the District Monopoly system. The Free-supply system is one of free competition among the licensed distillers in respect of manufacture. The right of vend is separately disposed of. The District monopoly system on the other hand is one in which the combined monopoly of manufacture and sale in a district is leased to a farmer subject to a certain amount of minimum still-head duty revenue in the monopoly area being guaranteed to the State during the term of the lease.

The recommendations of the Indian Excise Committee of 1905-06 resulted in numerous reforms in British India, one of them being that the various systems have been or are gradually being superseded by the Contract Distillery System under which the manufacture of spirit for supply to a district is disposed of by tender, the rate of still-head duty and the supply price to be charged are fixed in the contract and the right of vend is separately disposed of. This is the system that now prevails over the greater portion of British India. The other significant reforms have been the revision of the Provincial Excise Laws and regulations, and the conditions of manufacture, vend, storage and transport, an improvement in the quality of the spirit, an improved system of disposal of vend licences, reductions and re-distributions of shops under the guidance and control of local Advisory Committees and gradual enhancement of taxation with a view to checking consumption.

Since the issue of the report of the Excise Committee, 1905-06, no less than 213,000 square miles of territory were transferred from the out-still to the distilling system. In 1905-06 39 per cent. of the total excise area and 28 per cent. of the population of that area were served by out-stills, the proportions in 1912-13 were only 15 and 8 per cent. respectively.

The incidence of the total revenue derived from country distillery spirits per proof gallon during the quinquennium 1908-09 to 1912-13 was as follows:—

1908-09	..	..	Rs.	5.52
1909-10	..	..	..	5.72
1910-11	..	..	..	5.49
1911-12	..	..	..	5.84
1912-13	..	..	..	6.05

In the last year the incidence was highest in Berar 7.24 and lowest in Behar and Orissa 3.28. The average consumption of country spirits per 100 of the population in the distillery areas during the above period was as follows—

1908-09	..	..	Gallons L. P.	4.43
1909-10	..	..	..	4.11
1910-11	..	..	..	4.40
1911-12	..	..	..	4.52
1912-13	..	..	..	4.75

In 1912-13 it was highest in Bombay 15.22 and lowest in Bengal 2.13.

Sap of the date, palmyra, and cocoanut palms called toddy, is used as a drink either fresh or after fermentation. In Madras and Bombay the revenue is obtained from a fixed fee on every tree from which it is intended to draw the liquor

from shop license fees. In Bengal and Burma the sale of shop licenses is the sole form of taxation. Country brands of rum, and so-called brandies and whiskies, are distilled from grape juice, etc. The manufacture is carried out in private distilleries in various parts of India. A number of breweries has been established, mostly in the hills, for the manufacture of a flat beer for European and Eurasian consumption. The uniform fee of 4 annas 6 ples per gallon is levied all over India at the time of sale.

Foreign liquor is subject to an import duty at the tariff rates, the most important of which is Rs. 11-4-0 per proof gallon on spirit and 4 annas 6 ples per gallon on beer. It can only be sold under a license.

Since the war Brandy and Whisky are manufactured in considerable quantities at Baroda, the base used is the Mhowra flower. It is unknown in big towns as a substitute for German spirit, and is excised at tariff rates.

Drugs.—The narcotic products of the hemp not consumed in India fall under three main categories, namely, ganja or the dry flowering

tops of the cultivated female hemp plant; charas, or the resinous matter which forms an active drug when collected separately; and bhang, or the dried leaves of the hemp plant whether male or female cultivated or uncultivated. The main features of the existing system are restricted cultivation under supervision, storage in Bonded Warehouses, payment of a quantitative duty before issue, retail sale under licenses and restriction on private possession. Licenses to retail all forms of hemp drugs are usually sold by auction.

Opium.—Opium is consumed in all provinces in India. The drug is commonly taken in the form of pills; but in some places, chiefly on social and ceremonial occasions, it is drunk dissolved in water. Opium smoking also prevails in the City of Bombay and other large towns. The general practice is to sell opium from the Government Treasury, or a Central Warehouse, to licensed vendors. The right of retail to the public is sold by annual auction to one or several sanctioned shops.

The opium revenue in 1916-17 is estimated at £2,286,900, and the Excise revenue at £8,538,000.

### SALT.

The salt revenue was inherited by the British Government from Native rule, together with a miscellaneous transit dues. These transit dues are abolished and the salt duty consolidated and raised. There are four great sources of supply; rock salt from the Salt range and Great Salt Mines in the Punjab; brine salt from Sambhar Lake in Rajputana, salt brine condensed on the borders of the lesser Rann of Cutch, and sea salt factories in Bombay, Madras and at the mouth of the Indus.

The Salt Range mines contains an inexhaustible supply. They are worked in chambers excavated in salt strata, some of which are 250 feet long, 45 feet wide and 200 feet high. The Rajputana supply chiefly comes from the Sambhar Lake where brine is extracted and evaporated by solar heat. In the Rann of Cutch the brine is also evaporated by solar heat and the product is known as Baragara salt. In Bombay and Madras sea water is let into shallow pans on the sea-coast and evaporated by solar heat and the product sold throughout India. In Bengal the damp climate together with the large volume of fresh water from the Ganges and the Brahmaputra into the Bay of Bengal render the manufacture of sea salt difficult and the bulk of the supply,

both for Bengal and Burma, is imported from Liverpool, Germany, Aden, Bombay and Madras.

Broadly, one-half of the indigenous salt is manufactured by Government Agency, and the remainder under license and excise systems. In the Punjab and Rajputana the salt manufactures are under the control of the Northern India Salt Department, a branch of the Finance Department. In Madras and Bombay the manufactures are under the supervision of Local Governments. Special treaties with Native States permit of the free movement of salt throughout India, except from the Portuguese territories of Goa and Damaun, on the frontiers of which patrol lines are established to prevent the smuggling of salt into British India.

From 1888-1903 the duty on salt was Rs. 2-8 per maund of 82 lbs. In 1903, it was reduced to Rs. 2; in 1905 to Rs. 1-8; in 1907 to Rs. 1 and in 1910 it was raised to Rs. 1-4-0. The successive reductions in duty have led to a largely increased consumption, the figures rising by 25 per cent. between 1903-1908. To illustrate the growth of consumption, in 1902-03, with a tax of Rs. 2-8-0 per maund, the revenue was £5,586,068, for 1916-17 with a duty of Rs. 1-4-0, the estimated revenue is £3,987,600.

### CUSTOMS.

The import duties have varied from time to time according to the financial condition of the country. Before the Mutiny they were five per cent.; in the days of financial stringency which followed they were raised to 10 and in some cases 20 per cent. In 1875 they were reduced to five per cent., but the opinions of Free Traders, and the agitation of Lancashire manufacturers who felt the competition of the Indian Mills, induced a movement which led to the abolition of all customs dues in 1882. The continued fall in exchange compelled the Government of India to look for fresh sources of revenue and in 1894 five per cent. duties were re-

imposed, yarns and cotton fabrics being excluded. Continued financial stringency brought piece-goods within the scope of the tariff, and after various expedients the demands of Lancashire were satisfied by a general duty of 3½ per cent. on all woven goods—an import duty on goods by sea, an excise duty on goods produced in the country. The products of the hand-looms are excluded. These excise duties are intensely unpopular in India, for reasons set out in the special article dealing with the subject. In 1910-11, in order to meet the deficit threatened by the loss of the revenue on opium exported to China, the silver duty was raised

from 5 per cent. to 4d. an ounce, and higher duties levied on petroleum, tobacco, wines, spirits, and beer. These were estimated to produce £1 million annually.

The Customs Schedule was completely recast in the Budget of 1916-17 in order to provide additional revenue to meet the financial disturbance set up by the war. The general import tariff, which had been at the rate of 5 per cent. *ad valorem* since 1894 was raised to 7½ per cent. *ad valorem*, except in the case of sugar; as India is the largest producer of sugar in the world the import duty on this staple was fixed at 10 per cent. There was also a material curtailment of the free list. The principal article of trade which was not touched was cotton manufactures. For the past twenty years the position has been that cotton twists and yarns of all kinds are free of duty while a duty at the rate of 3½ per cent. is imposed on woven goods of all kinds whether imported or manufactured in Indian mills. The Budget left the position as it stood. The Government of India would have been glad to see the tariff raised to 5 per cent. without any corresponding alteration of the excise, but were over-ruled by the Cabinet on the ground that this controversial matter must come up for discussion after the war. Finally the Budget imposed export duties on tea and jute. In the case of tea the duty was fixed at Rs. 1-8-0 per 100 lbs.; in the case of jute the export duty on raw jute was fixed at Rs. 2-4-0 per bale of 400 lbs., approximately equivalent to an *ad valorem* duty of 5 per cent.; manufactured jute was charged at the rate of Rs. 10 per ton on sacking and Rs. 16 per ton on Hessian.

The Customs revenue for the current year is estimated at £7,698,000.

The Customs Department is administered by an Imperial Customs Service responsible to the Imperial Government in the Department of Commerce and Industry, but acting through the Local Governments. The senior Collectors are Covenanted Civilians specially chosen for this duty; the subordinates are recruited in India and in England (Customs Tariff q. v.)

### Income Tax.

The income tax was first imposed in India in 1860, in order to meet the financial dislocation caused by the Mutiny. It was levied at the rate of four per cent. or a little more than 9½ d. in the pound on all incomes of five hundred rupees and upwards. Many

changes have from time to time been made in the system, and the present schedule was consolidated in the Act of 1886. This imposed a tax on all incomes derived from sources other than agriculture which were exempted. On incomes of 2,000 rupees and upwards it fell at the rate of five pies in the rupee, or about 6½ d. in the pound; on incomes between 500 and 2,000 rupees at the rate of four pies in the rupee or about 5d. in the pound. In March 1903 the minimum taxable income was raised from 500 to 1,000 rupees. The income-tax schedule was completely revised, raised, and graduated in the Budget of 1916-17 in the general scale of increased taxation imposed to meet the deficit arising out of war conditions. All existing exemptions were left untouched and no alteration was made in the taxation of persons whose incomes, official or private, were less than Rs. 5,000 per annum. In the case of incomes which exceeded the sum of Rs. 5,000 per annum the tax was enhanced in the following way:—

- (1) Incomes from Rs. 5,000 to Rs. 9,999 pay 6 pies in the rupee, or 7½ d. per pound.
- (2) Incomes from Rs. 10,000 to Rs. 24,999 pay 9 pies in the rupee, or 11½ d. in the pound.
- (3) Incomes of Rs. 25,000 and upwards pay 1 anna in the rupee, which is equivalent to 1s. 3d. in the pound.

Profits of companies are assessed at the 1 anna rate; but this is subject to abatement or exemption, to individual shareholders who can show that their total income is such as to warrant a lower rate of taxation or none at all. Thus a shareholder whose income is less than Rs. 1,000 per annum from all sources obtains a refund of the entire tax previously recovered on his dividends; a man whose total income is Rs. 5,000 obtains a refund of the amount recovered in excess of the 6 pie rate; and so on.

The total number of income tax assesses in 1914-15, counting companies as persons, was about 332,000. Of these about 216,000 were assessed on incomes between Rs. 1,000 and Rs. 1,999 and 79,000 between Rs. 2,000 and Rs. 4,999. Consequently no less than 295,000 of the present assesses were unaffected by the new rates of taxation, which fall on the 37,000 who are relatively well-to-do. Of these again, about 24,000, on incomes between Rs. 5,000 and Rs. 9,999 only have their tax increased by 1 pie in the rupee. The additional yield is estimated at £900,000 from this increased taxation. The yield of the income tax is estimated at (1916-17) £2,912,800.

## THE DEBT.

To understand the debt of India it must be remembered that the Government of India always a borrower. The country still needs vast capital expenditure both on Railways and irrigation; indeed the expenditure on railways always conditioned not by the needs of the country, but by the ability of the market to supply capital—a supply which is always unequal to the demand. In the case of irrigation supply of capital has of late years been equal to the amount which could be spent; great irrigation schemes require long and elaborate investigation and when the investigations are complete the actual construction of the works is checked by the labour supply, which is increasingly expensive and rarely equal to the demand. These conditions make India a constant borrower, and she raises every year as much money as the Indian and London money markets can supply. The whole of this money is spent on productive works. The Indian money system now returns to the State, after paying all interest charges and certain annuities for the redemption of capital, a surplus which is with the character of the season. The irrigation works return a profit of over five per cent. Whilst therefore India is a constant borrower, she borrows only for expenditure on productive works. Her finance is even more conservative than this, for in most years a reserve is set apart from the revenue surplus for expenditure on capital works. Through the adoption of this policy the unproductive debt of India has been reduced to negligible proportions. It has been estimated by competent authorities that if a fair balance sheet were worked the balance would be on the right side.

When the trading charter of the East India Company expired in 1835, the rupee debt was Rs. 332·95 millions. Fifteen years later, in 1850-51, the debt reached Rs. 453·36 millions, but it stood at almost exactly that sum in the year preceding the mutiny of 1857. That confusion caused a large increase in the rupee debt which stood at Rs. 635·55 millions in 1859-60, year following the suppression of the revolt. The debt then gradually rose to Rs. 907·57 millions by 1874-75, and another large increase occurred in the succeeding decade, due to the famine of 1877-78 and to the military operations in Afghanistan which followed the war. By 1883-84 the rupee debt rose to Rs. 931·25 millions. There was then a further increase to Rs. 980·4 millions in 1887-88, to Rs. 1,007·48 millions in 1888-89, and to Rs. 1,032·8 millions in 1893-94. A three per cent. loan was raised in July 1890, and the debt stood at Rs. 1,082·12 millions at the end of 1897 and increased to Rs. 1,191·99 millions in 1903-04, to Rs. 1,258·75 millions in 1905-06, to Rs. 1,366·67 millions in 1909-10, and to Rs. 1,397·93 millions in 1911-12.

A four per cent. terminable loan of Rs. 4½ crores (£3 millions) was issued in 1915, and another of Rs. 6·77 crores in 1916. The next dimensions of the debt are given below under the head of "Interest."

## Sterling Debt.

The interest-bearing sterling debt was very small until the mutiny year, but the increase was rapid after that. As in India, the rate of interest on the sterling debt has been gradually reduced from 4, 4½, and 5 per cent. to 2½, 3, and 3½ per cent. respectively. At the end of 1910-11 proportions of the debt held at these rates are £11,892,207 at 2½ per cent., £86,724,530 (including 3 per cent., India stock of the nominal value of £3,000,000 issued in August 1900, £2,009,500 issued in 1901-02, £1,500,000 issued in May 1902, £1,500,000 issued in 1903-04, £2,500,000 issued in 1904-05, £12,089,146 issued in 1905-06, and £2,000,000 issued in 1906-07) at 3 per cent. and £285,511,748 at 2½ per cent. In May 1907 a 3½ per cent. sterling loan of £3,500,000 was raised and in January 1908 a further 3½ per cent. loan of £5,000,000 was raised towards providing for railway-capital expenditure of 1908-09 and for the discharge of certain Bombay, Baroda and Central India Railway debentures. Similarly in February 1909, a loan of £7,500,000 and in January 1910 a further loan of £7,500,000 were issued at the same rate of interest. In October 1910, 3½ per cent. India Bonds for £4,000,000 were issued for the discharge of the Madras and Indian Midland Railway debentures and in March 1911 a new 3½ per cent. sterling loan of £3,500,000 was issued to provide funds for capital expenditure in 1911-12.

## Railway Expenditure.

A large proportion both of the sterling and of the rupee debt was incurred in connection with the construction of railways and other public works. Considerable additions to the rupee and sterling debt were made in the two years 1896-97 and 1897-98 in consequence of famine, plague, war, and the prosecution of railway extension, and to the sterling debt in 1900 and subsequent years for the purchase of the G. I. P. Railway, the discharge of its debentures, and advances of Indian Railway Companies. In addition to the loans raised during 1907-08 the Secretary of State incurred liability in respect of £2,144,800 debentures of the Madras Railway Company on the purchase of the undertaking on the 31st December 1907. In the Budget of 1916-17 the total interest charges £9,957,000 are distributed as follows:—Railways £8,147,000; Irrigation £1,500,400; Interest on ordinary debt £298,900.

## Interest.

The interest on the rupee debt was at the rate of six per cent. in 1822, and the debt bearing this rate was not finally paid off until 1858-59. Meanwhile the Government borrowed, from 1823 until 1852-53, at five per cent. and from 1824 (but in a small way until 1835) at four per cent. The bulk of the five per cent. debt was converted to four per cent. in 1854, but the shock to the credit of the State caused by the mutiny necessitated more borrowing at the higher rate of five per cent. and that loan was not finally extinguished until 1871. Meanwhile the Government were compelled to borrow at 5½ per cent. in 1859, and this 5½ per cent. loan was not closed until 1878-79. A small sum was borrowed at 4½ per cent. in 1856-57, and the debt at this rate of interest was largely increased in 1871 by the

conversion of the 5½ per cent. loan. By 1878-79 practically the whole rupee debt bore interest at 4½ and 4 per cent. Rs. 151·48 millions at 4½, and Rs. 618·88 millions at 4 per cent. The 4½ per cent. loans were all converted to 4 per cent. by 1893, save for a sum of Rs. 10 millions, being a loan from the Maharaja Holkar on account of the Indore State Railway, which is not convertible until about 1970. In the same year a small loan of Rs. 35·5 millions was raised at 3½ per cent. and in the following year the bulk of the 4 per cent. loans was converted to the rate of 3½ per cent. In 1896-97 a new loan of Rs. 40 millions was raised at 3 per cent. On the 4th July 1900 a loan of Rs. 30 millions was raised at 3½ per cent. and this was followed by other loans, at the same rate of interest.

In 1915, in order to meet the higher price of money caused by the war, the 4½ crore loan was

issued at 4 per cent. and was redeemable in 1923, and another of 6·75 crores in 1916.

The debt provided for in the Budget for 1916-17, is as follows:—

Sterling .. .. .	£ 180,282,858
Rupee—	
4 per cent. .. .. .	Rs. 14,68,90,000
3½ per cent. .. .. .	1,38,53,25,400
3 per cent. .. .. .	7,72,75,500
Other debt .. .. .	1,00,14,300
Temporary Loans .. .. .	6,50,00,000
Savings Bank Balances .. .. .	23,35,20,176

The Budget for 1915-16 provided for an Expenditure on interest of Rs. 5,80,25,000 in India or sterling £ 3,868,800 and £ 6,088,700 in England, or a total of £ 9,957,500.

### Absorption of Gold in India.

(In lakhs of Rupees)

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
1. Net annual addition to the stock of the country ..	16,000	18,000	27,000	25,000	18,000	7,000	1,600
2. Progressive total of additions to the stock ..	144,000	162,000	189,000	214,000	232,000	239,000	240,600
3. Held in mints and Government Treasuries and Currency and Gold Standard Reserves .. .. .	6,000	6,000	16,000	20,000	15,000	10,000	8,000
4. Net annual variation in item 3 .. .. .	6,000	....	10,000	4,000	—5,000	—5,000	—2,000
5. Net progressive absorption.	138,000	156,000	173,000	194,000	217,000	229,000	232,600
6. Absorption of the year ..	10,000	18,000	17,000	21,000	23,000	12,000	3,000

NOTE:—Item 1 shows the amount of gold produce in India *plus* the net imports (i.e., imports *minus* exports). In 1915-16 the gold produced was £2,369,845 *minus* net exports £739,412=£1,600,000 in round figures. Item 2 shows the progressive total of the figures in item 1 to the end of each year. Total at end of 1914-15 £239 millions *plus* figure for 1915-16 £1,600,000=£240,600,000 at the end of 1915-16. Item 3 shows the reserve held in India in each year. Item 4 shows the annual variations in the actual amount held in the mints and in the reserves in India. Amount held in 1915-16 £8 millions *minus* that held in 1914-15 £10 millions is equal to £2 millions shown against this item in 1915-16. Item 5 shows the difference between item 2 (progressive total) and 3 (amounts held in the mints, etc.) £240,600,000 *minus* £8 millions=£232,600,000 during 1915-16. Item 6 shows the difference between two successive figures in item 5. £232,600,000 *minus* £229 millions=£3,600,000 during 1915-16; or, in other words, the difference between item 1 (annual addition to the stocks) and item 4 (net variation in item 3); £1,600,000 *minus* (—2,000,000), i.e., £3,600,000 is the net absorption of the year.

TABLE OF THE RUPEE AND STERLING DEBT AND OF THE INTEREST THEREON, ANNUAL INCREASE OR REDUCTION OF THE DEBT  
AND THE PROPORTION OF THE RUPEE DEBT HELD IN LONDON, FROM 1820-21 TO 1915-16.

	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off -)		Proportion of the registered rupee debt held in London on 31st March.
			Rs.	£	Rs.	£	
1820-21	27,24,77,630	5,762,888	1,67,15,400	253,247	-26,73,970	-109,268	
1830-31	33,12,96,680	3,750,479	1,74,19,770	93,377	+75,52,710	-45,413	
1840-41	29,47,45,040	1,756,992	1,35,37,050	58,856	+1,15,89,400	-400	
1850-51	45,42,87,550	3,920,592	2,12,39,750	136,482	+1,00,72,750	-100	
1860-61	63,44,58,100	28,496,917	2,88,34,460	1,249,832	-10,05,920	+4,138,000	
1871-72	63,42,98,450	32,116,217	2,88,32,440	1,437,874	-2,49,650	+3,619,300	
1882-83	63,82,11,060	31,860,017	2,89,95,320	1,430,765	+40,02,610	-256,200	
1883-84	63,40,38,320	26,332,517	2,88,08,180	1,204,621	-41,72,740	-5,527,500	
1884-85	63,36,66,840	26,146,017	2,88,00,400	1,283,165	-3,71,480	-136,500	
1885-86	62,38,10,770	26,967,317	2,84,13,900	1,274,230	-95,56,070	+821,300	
1886-87	62,97,34,230	28,559,917	2,87,13,200	1,402,540	+59,73,460	+1,592,600	
1887-88	63,76,50,020	29,718,417	2,91,57,860	1,448,875	+78,65,790	+1,158,500	
1888-89	63,41,06,910	31,218,917	2,89,87,270	1,469,916	-35,43,310	+1,500,500	
1889-90	65,59,34,220	35,217,617	2,98,17,500	1,629,868	+2,18,27,310	+3,998,700	15,38,06,930
1890-91	66,80,96,570	37,627,617	3,01,56,310	1,728,263	+1,21,62,350	+2,410,000	16,24,51,720
1891-92	67,96,99,420	39,012,617	2,98,08,300	1,731,618	+1,15,92,850	+1,385,000	17,64,70,910
1892-93	66,42,83,690	39,012,617	2,89,20,500	1,831,467	+1,51,05,730	+1,355,000	13,56,38,630
1893-94	66,41,72,910	41,117,617	2,89,50,960	1,867,121	-4,10,780	+2,105,000	13,04,77,110
1894-95	69,84,99,590	48,597,033	3,03,35,320	2,165,364	+3,43,26,680	+7,479,416	14,05,71,800
1895-96	72,77,29,810	49,797,033	3,15,20,180	2,212,582	+2,92,30,220	+1,290,000	15,47,77,080
1896-97	71,92,31,260	55,397,033	3,10,98,710	2,438,271	+84,98,550	+5,600,000	14,21,01,660
1897-98	74,95,45,200	59,677,033	3,22,68,910	2,607,472	+3,03,13,940	+4,280,000	15,78,70,170
1898-79	78,84,59,260	59,029,117	3,25,77,260	2,581,555	+3,88,44,060	-687,916	17,14,82,760
1899-80	82,87,25,090	68,855,556	3,41,76,560	1,937,886	+4,03,35,830	+9,826,439	20,52,60,670
1880-81	85,93,97,460	71,429,133	3,57,92,700	2,846,478	+3,08,72,370	+2,573,577	20,26,31,450
1881-82	88,65,81,620	68,161,947	3,66,43,280	2,708,198	+2,69,34,160	-3,287,186	22,65,59,550
1882-83	90,66,87,660	68,585,694	3,74,11,490	2,725,748	+2,03,56,040	+443,747	22,58,11,320
1883-84	93,19,13,840	68,108,837	3,84,91,140	2,704,207	+2,50,26,180	-476,857	22,08,75,180

(a) No information.

## AMOUNT OF THE RUPEE AND STERLING DEBT—(contd.)

	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
			Rs.	£.	Rs.	£.	
1884-85	93,18,36,600	69,271,088	3,84,18,550	7,691,828	—77,240	+1,162,251	21,83,38,370
1885-86	92,70,39,820	73,506,621	3,77,38,380	7,833,068	—47,96,780	+4,535,533	20,71,23,580
1886-87	92,65,36,360	84,228,177	3,82,02,570	3,165,411	+5,03,460	+10,421,556	19,14,55,570
1887-88	98,08,98,620	84,140,148	4,03,78,580	2,918,039	+5,43,62,260	—88,029	20,81,88,870
1888-89	1,00,37,97,420	95,033,610	4,13,73,120	3,230,474	+2,78,98,800	+10,893,462	21,71,40,680
1889-90	1,02,76,11,750	98,192,391	4,21,56,080	3,327,348	+1,98,14,330	+3,158,781	21,59,40,490
1890-91	1,02,74,65,550	104,408,208	4,17,51,110	3,524,376	—1,46,200	+6,215,817	26,73,12,950
1891-92	1,02,69,23,170	104,404,143	4,17,15,000	3,602,349	+5,42,350	+2,995,953	27,50,58,410
1892-93	1,02,93,75,520	106,883,767	4,12,77,760	3,570,682	+24,52,350	—720,376	25,93,38,610
1893-94	1,05,54,60,780	114,113,792	4,20,92,060	3,637,986	+2,60,85,260	+7,430,025	24,16,55,410
1894-95	1,04,37,47,400	116,005,826	3,61,09,140	4,825,323	—1,17,23,380	+1,892,034	23,62,59,660
1895-96	1,03,78,89,280	115,903,732	3,64,00,740	3,607,832	—58,48,120	—102,094	25,35,07,520
1896-97	1,09,11,50,530	114,883,233	3,78,43,760	3,813,208	+5,37,61,250	—1,020,499	24,06,66,620
1897-98	1,11,69,56,340	123,274,680	3,87,11,060	3,940,776	+2,58,05,810	+8,391,447	21,50,87,030
1898-99	1,12,65,46,980	124,268,605	3,91,13,340	3,882,758	+95,90,640	+983,925	21,44,12,330
1899-1900	1,12,47,47,010	124,144,401	3,90,56,317	3,877,026	—17,99,970	—124,204	20,81,88,234
1900-01	1,15,33,19,058	133,435,377	4,00,58,600	4,158,351	+2,85,72,048	+9,290,978	22,18,12,135
1901-02	1,16,19,13,832	134,307,090	4,03,60,615	4,213,821	+85,94,775	+371,711	20,36,22,034
1902-03	1,17,53,40,660	133,796,261	4,08,37,864	4,213,537	+1,36,26,837	—510,879	18,63,35,034
1903-04	1,19,42,43,035	133,045,844	4,14,90,065	4,238,273	+1,87,02,375	—750,417	17,13,92,234
1904-05	1,22,29,78,235	132,887,191	4,24,92,525	4,282,744	+1,57,35,200	—158,653	16,81,55,234
1905-06	1,26,08,10,618	146,437,439	4,38,10,365	4,715,233	+3,78,32,353	+13,370,248	16,45,82,933
1906-07	1,30,45,50,655	147,518,634	4,53,38,937	4,743,108	+4,37,40,037	+1,061,195	16,49,16,833
1907-08	1,32,82,94,955	156,481,074	4,61,66,110	5,033,632	+2,37,44,300	+8,962,440	15,23,21,733
1908-09	1,34,56,60,505	160,973,369	4,68,19,197	5,210,695	+1,73,65,550	+4,492,295	14,43,66,433
1909-10	1,36,84,83,105	170,105,911	4,76,47,428	5,530,757	+2,27,72,600	+9,132,542	15,21,19,933
1910-11	1,38,09,72,155	177,898,335	4,81,24,302	5,608,417	+1,25,39,050	+7,892,424	12,78,49,733
1911-12	1,39,96,36,205	178,486,397	4,87,76,458	5,765,597	+1,64,64,030	+488,262	11,78,03,533
1912-13	1,42,68,64,790	179,179,193	4,97,78,481	5,749,881	+2,87,28,585	+692,586	11,20,29,433
1913-14	1,45,68,55,790	177,064,757	5,07,80,519	5,693,919	+2,84,91,000	—2,114,436	10,08,74,833
1914-15	1,50,52,65,200	176,190,358	5,25,30,534	5,682,898	+4,84,09,410	—874,399	9,72,99,850
1915-16	1,53,89,36,400	182,657,257	5,89,00,000	6,092,300	.....	.....	.....

INDIAN DEBT IN ENGLAND.

RETURN of all LOANS raised in England, under the Provisions of any Acts of Parliament, chargeable on the REVENUES of India, outstanding at the Commencement of the Half-year ended on the 30th September 1916

DESCRIPTION OF LOAN.	Total Amount of Interest payable thereon during the Half-year ended 30th September 1916.	DATE OF TERMINATION OF LOAN.	Amount of Debt paid or discharged during the Half-year ended 30th September 1916.	Amount of Debt outstanding on 30th September 1916.
<b>LOANS BEARING INTEREST.</b>				
India 3½ per cent. Stock .. ..	£ 1,594,903	Not redeemable until 5th January 1931, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	£ 183,635 61 12½	90,892,659
India 3 per cent. Stock .. ..	988,780	Not redeemable until 5th October 1948, but on or after that day upon one year's previous notice having been given by the Secretary of State for India in Council ..	41,400 12½55	65,864,687
India 2½ per cent. Stock .. ..	140,125	Not redeemable until 5th October 1926 but on or after that day upon one year's previous notice having been given by the Secretary of State for India in Council ..	....	11,688,987
India Bonds .. ..	26,250	One-eighth part of £4,000,000 redeemable at par on the 12th October in each of the eight years from 1911 to 1918 both inclusive, the bonds to be redeemed in each year being determined by lot and paid off ..	3,500,000	1,500,000 3,500,000
India Bills .. ..	....	.....	....	1,435,650
East Indian Railway Debenture Stock 4½ per cent. .. ..	32,302	.....	....	348,666
Eastern Bengal Railway Debenture Stock 4 per cent. .. ..	6,973	.....	....	425,000
South Indian Railway Debenture Stock 4½ per cent. .. ..	9,562	.....	....	2,701,450
Great Indian Peninsula Railway Debenture Stock 4 per cent. ..	54,029	.....	....	178,358,022
<b>LOANS NOT BEARING INTEREST.</b>				
India 5 per cent. Stock .. ..	....	Total Debt in England bearing Interest..	3,798,716	9,305
India 4 per cent. Stock .. ..	....	5th July 1880 .. ..	....	5,779
	....	10th October 1888 .. ..	....	15,084
	....	Total Debt in England not bearing Interest..	....	
	2,858,924	Total Debt in England .. ..	3,798,716	178,373,113

India Debt created and issued under the East India Loans (Railways and Irrigation) Act 1910 to the 30th September 1916.



## THE RUPEE DEBT.

Return of the Interest Bearing Rupee Debt of the Government of India as at 31st July 1916.

In Thousands of Rupees.

Particulars.	Date of Issue.	Conditions of Repayment.	Amount	Total.
<b>Railway Loans—</b>				
Maharaja Holkar 4½ p. c.	(1870-77)	After 101 years .. ..	10000	
Maharaja Scindia 4 p. c.	.....	Perpetual .. ..	15000	
Nawab of Rampur 4 p. c.	(1892-93)	After one year's notice to be given on or after 1st Dec 1917.	4700	
<b>Special Loans—</b>				
Gwalior, 4 p. c. 1887 ..	....	By annual instalments of 12 lakhs.	12200	29700
Four p. c. Terminable Loan, (1915-16)	1st Dec. 1915	On or before 30th November 1923, but not preceding 30th November 1920, with three months' previous notice.	(a) 49986	12200
Conversion Loan, 1916 17..	1st Oct. 1916.	On or before 1st October 1916, but not preceding 1st October 1911, with three months' previous notice.	(b) 64,300	
<b>Three and Half per cent.</b>				114376
1842-43 .. ..	1st Feb. 1843		223952	
1854-55 .. ..	30th June 1854		338052	
D. coupon				
1865 .. ..	1st May 1865		4770	
Reduced, 1879 .. ..	16th Jan. 1879		380484	
1900-1 .. ..	30th June 1900		38712	
<b>Three per cent.</b>				
1896-97 .. ..	22nd July 1896		399172	1385142
			77487	77487
		<b>TOTAL ..</b>		<b>1618905</b>

(a) Inclusive of 4986 representing Loan raised through Post Offices.

(b) " " 878 " " " " " "

## DISTRIBUTION OF RUPEE DEBT.

	Calcutta.	Inland.	Madras.	Bombay.	Total India.
Railway Loans ..	....	29700	....	....	29700
Special Loan ..	....	12200	....	....	12200
4 per cent. ..	4444	26180	13262	31481	114376
3½ per cent. ..	601811	271355	81556	345984	1302726
3 per cent. ..	47095	11364	7370	8739	74558
	692370	350798	101188	380204	1533560

	Proportion in India held by		Held in London.	Unissued.	Total as above.
	Indians.	Europeans.			
Railway Loans ..	29700	....	....	....	29700
Special Loan ..	12200	....	....	....	12200
4 per cent. ..	35325	79051	....	....	114376
3½ per cent. ..	737032	565644	82416	....	1385142
3 per cent. ..	80979	43579	2929	....	77487
	845286	688274	85345	....	1618905

## STERLING DEBT.

Debt Bearing Interest.	Capital of Debt.		Rate %	Annual Interest payable.	
	31st March 1915.	31st March 1916.		31st March 1915.	31st March 1916.
	£	£		£	£
India 3½ per cent. Stock .. ..	91137350	91137350	3½	3189807	3189807
India 3 per cent. Stock .. ..	66028171	65918642	3	190845	1977559
India 2½ per cent. Stock .. ..	11689987	11689987	2½	292250	292250
India Bonds .. ..	2000000	1500000	3½	70000	52500
India Bills .. ..	7000000	7000000	....	....	....
East India Railway Debenture Stock ..	1435650	1435650	4½	64604	64604
Eastern Bengal Ry. Debenture Stock ..	348666	348666	4	13947	13947
South India Ry. Debenture Stock ..	425000	425000	4½	19125	19125
G. I. P. Railway Debenture Stock ..	2701450	2701450	4	108058	108058
Indian Midland Ry. Debentures ..	407500	....	3½	14263	....
	183173774	182156745			
Debt not bearing Interest—					
India 5 per cent. Stock .. ..	9305	9305			
India 4 per cent. Stock .. ..	7279	5779			
	16584	15,084			
Total Debt and Annual Interest thereon on 31st March 1915 .. ..	183190358	182171820		5752899	5717850

## INDIAN RAILWAY ANNUITIES.

	31st March 1915.	31st March 1916.
East Indian Railway	£	
Annuity terminating in 1953 .. ..	849167	
Interest in lieu of deferred annuity .. ..	262000	
Eastern Bengal Railway Annuity terminating in 1957 ..	116831	
Sind Punjab & Delhi Railway Annuity terminating in 1958.	371214	
G. I. P. Railway Annuity terminating in 1948 .. ..	1268471	
Madras and Southern Mahratta Railway Annuity terminating in 1956.. ..	488381	
Total ..	3356064	(Later figures not available.)

## THE INDIAN MINTS.

The Mint in Calcutta dates from the end of the 17th century. The present building, designed by Major N. W. Forbes, was opened in 1831, the central portico being held to be "a copy, on half dimensions, of the temple of Minerva at Athens." The Copper Mint, to the north-east of the Silver Mint, was opened in 1865.

*Mint Master*, Lieut.-Col. A. L. C. McCormick, R.E.

*Assay Master*, Lieut.-Col. J. J. Bourke, I.M.S.

*Deputy Assay Master*, Lieut.-Col. F. T. C. Hughes, I.A., F.C.S.

**The Bombay Mint**—The first Mint established in Bombay, in 1670, was for the coinage of

"rupees, pies and bujruks," authority for its working being granted by letters patent. The erection of the present Mint was sanctioned by the East India Company in 1823, and was designed by Major John Hawkins of the Bombay Engineers. The cost of construction was estimated at 36 lakhs.

*Mint Master*, Major G. H. Willis, M.V.O., R.E.

*Assistant Mint Master*, Mr. A. E. B. Gordon.

*Assay Master*, Lt.-Colonel J. Lloyd Thomas

Jones, I.M.S.

*Deputy Assay Master*, Major H. J. Wallis, I.A.

During the year 1914-1915 gold to the value of Rs. 2,83,63,850 was tendered at the two Mints.

The following statement shews the details of the silver coinage executed for the Government of India in the two mints during 1914-15 :—

	Calcutta.	Bombay.	Total.
	Value in Rs.	Value in Rs.	Value in Rs.
Rupees .. .. .	1,26,00,000	54,71,853	1,80,71,853
Half-Rupees .. .. .	6,99,940	4,51,664	11,51,610
Quarter-Rupees .. .. .	5,68,469	5,24,113	10,92,582
Eighth-rupees .. .. .	7,36,460	7,42,841	14,79,291
Total ..	1,46,04,865	71,90,471	2,17,95,336
Total for 1913-14 .. ..	6,63,36,058	6,52,32,479	13,15,68,537

There was no coinage of rupees from purchased silver during the year. The amount of fractional silver coined was also much less than in the preceding year owing to the existence of adequate stocks in treasures and depots, and to a falling off in the demand for small coin generally.

**Nickel coinage** was confined to the Bombay Mint and consisted of 42,352,000 anna pieces of the nominal value of Rs. 26,47,000 against 46,320,000 pieces of the nominal value of Rs. 28,95,000 coined in the previous year.

**Bronze coinage** which was as usual carried out entirely at the Calcutta Mint, consisted of pie, half-pie, and pies of the aggregate value of Rs. 4,60,700, as compared with Rs. 20,85,439 in the preceding year. There was a large return of single pie from circulation and this accounts for the falling off in the coinage. In addition to the coinage work of the Government of India Rs. 40,000 worth of cents and half cents were coined for the Ceylon Government, and Rs. 3,125 worth of Copper amman cashes for the Pudukotai Durbar.

The Revenue and Expenditure of the two Mints (including interest on capital outlay and other *pro forma* charges) amounted to Revenue, Rs. 3,55,924 and Expenditure, Rs. 19,45,878.

## HISTORY OF THE COINAGE.

The Indian mints were closed to the unrestricted coinage of silver for the public from the 26th June 1893, and Act VIII of 1893, passed on that date, repealed Sections 19 to 26 of the Indian Coinage Act of 1879, which provided for the coinage at the mints for the public of gold and silver coins of the Government of India. After 1893 no Government rupees were coined until 1897, when, under arrangements made with the Native States of Bhopal and Kashmir, the currency of those States was replaced by Government rupees. The re-coinage of these rupees proceeded through the two years 1897 and 1898. In 1899 there was no coinage of rupees; but in the following year it seemed that coinage was necessary, and it was begun in February 1900, the Government purchasing the silver required, and paying for it mainly with the gold accumulated in the Paper Currency Reserve. In that and the following month a

The Gold and Silver Assays made during the year numbered.

	Calcutta.		Bombay.	
Year.	Gold.	Silver.	Gold.	Silver.
1914-15	471	10,085	3,286	4,122.

The Indian denominations with their British equivalents are :—

Pie	= 1/12 penny.
Pice (3 pies)	= 1 farthing.
Anna (12 pies)	= 1 penny.
Rupee (16 annas)	= 1s. 4d.

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

The equivalents of the rupee in various currencies are approximately as follows :—

One rupee	= 1·68 franc (France, Italy, Belgium, &c.).
::	= 1·36 mark (Germany).
::	= 1·6 krone (Austria-Hungary).
::	= 0·324 dollar (United States).
::	= 0·65 yen (Japan).

The denominations of currency notes in circulation are 5, 10, 20, 50, 100, 500, 1,000, and 10,000 rupees.

crore of rupees was coined and over 17 crores of rupees in the year ending the 31st March 1910, including the rupees issued in connection with the conversion of the currencies of Native States. From the profit accruing to Government on the coinage it was decided to constitute a separate fund called the Gold Reserve Fund as the most effective guarantee against temporary fluctuations of exchange. The whole profit was invested in sterling securities, the interest from which was added to the fund. In 1906 exchange had been practically stable for eight years, and it was decided that of the coinage profits devoted to this fund, six crores should be kept in rupees in India, instead of being invested in gold securities. The Gold Reserve Fund was then named the Gold Standard Reserve. It was ordered in 1907 that only one-half of the coinage profits should be paid into the reserve, the remainder being used for

capital expenditure on railways. The Gold Standard Reserve was called into action before the year 1907-08 was out. Exchange turned against India, and in March 1908, the Government of India offered bills on the Secretary of State up to half a million sterling, while the Secretary of State sold £1,000,000 Consols in order to meet such demands. During April to August, further sterling bills were sold for a total amount of £8,059,000. On a representation by the Government of India, the Secretary of State agreed to defer the application of coinage profits to railway construction until the sterling assets of the Gold Standard Reserve amounted to £25,000,000. On the outbreak of the war in August 1914 the Reserve was drawn upon to meet the demands for sterling remittances, and Government offer to sell £1,000,000 of Bills weekly. The extent of these rates is shown on pp. 191, 192.

#### Gold.

Since 1870 there has been no coinage of double mohurs in India and the last coinage of single mohurs was in the year 1891-92.

Act XXII of 1899, passed on the 15th September 1899, provided that gold coin (sovereign and half-sovereigns) shall be a legal tender in payment or on account at the rate of fifteen rupees for one sovereign.

#### Silver.

The weight and fineness of the silver coins are —

—	FINE SILVER. grains.	ALLOY. grains.	TOTAL. grains.
Rupee .. ..	165	15	180
Half-rupee ..	82½	7½	90
Quarter-rupee or 4- anna piece ..	41½	3½	45
Eighth of a rupee or 2-anna piece ..	20½	1½	22½

One rupee = 165 grains of fine silver.  
One shilling = 80½ grains of fine silver.  
One rupee = shillings 2·0439.

#### Copper and Bronze.

Copper coinage was introduced into the Bengal Presidency by Act XVII of 1835, and into the Madras and Bombay Presidencies by Act XXII of 1844.

The weight of the copper coins struck under Act XXIII of 1870 remained the same as it was in 1835. It was as follows:—

	Grains troy.
Double pice, or half-anna .. ..	200
Pice or quarter-anna .. ..	100
Half-pice or one-eighth of an anna ..	50
Pie, being one-third of a pice or one- twelfth of an anna .. ..	33½

The weight and dimensions of bronze coins are as follows:—

	Standard weight in grains troy.	Diameter in milli- metres.
Pice .. ..	75	25·4
Half-pice .. ..	37½	21·15
Pie .. ..	25	17·45

#### Nickel.

The Act of 1906 also provides for the coinage of a nickel coin. It was directed that the nickel one-anna piece should thenceforth be coined at the Mint and issue. The notification also prescribed the design of the coin, which has a waved edge with twelve scollops, the greatest diameter of the coin being 21 millimetres, and its least diameter 19·8 millimetres. The desirability of issuing a half anna nickel coin was considered by the Government of India in 1909, but after consultation with Local Governments it was decided not to take action in this direction until the people had become thoroughly familiar with the present one-anna coin.

## The Paper Currency.

Under Acts VI of 1839, III of 1840, and IX of 1843, the Presidency Banks of Bengal, Bombay, and Madras were authorised to issue notes payable on demand, but the issue of the notes was practically limited to the three cities of Calcutta, Bombay, and Madras. These Acts were repealed, on the 1st March 1862, by Act XIX of 1861, providing for the issue of a paper currency through a Government Department, by means of notes of the Government of India payable to bearer on demand. Since then no banks have been allowed to issue notes in India.

Act II of 1910 amended and consolidated the law on the subject. By it, a note of the value of five, ten, or fifty rupees, as well as a note of any other denominational value which the Governor General in Council may, by notification in the *Gazette of India*, so specify, was declared to be a "universal currency note," that is, legal tender throughout British India and encashable at any office of issue in British India; the then existing sub-circles of Cawnpore, Lahore, Karachi, and Calcutt were abolished, and the first three of these constituted separate circles of issue in addition to Calcutta, Madras, Bombay, and Rangoon. At the same time, by a notification issued under the Act, the further issue of 20-rupee notes was discontinued. By another notification issued in 1911 under section 2 of the same Act a currency note of the denominational value of one hundred rupees was declared to be a "universal currency note."

### Department of Paper Currency.

The function of this department is to issue, without any limits, promissory notes (called currency notes) of the Government of India payable to the bearer on demand, of the denominations of Rs. 5, 10, 50, 100, 500, 1,000, and 10,000, the issue being made in exchange for rupees or half rupees or for gold coin, which is legal tender, from any Paper Currency office or agency, and for gold bullion and gold coin, which is not legal tender, from circle offices on the requisition of the Comptroller General.

### Supply and issue of Currency Notes.

Currency notes are supplied by the Secretary of State through the Bank of England on an indent from the Head Commissioner. The Head Commissioner or Commissioners supply Currency Agents with all the notes required for the purposes of the Paper Currency Act. Every such note, other than a "universal" note, bears upon it the name of the place from which it is issued and every note is impressed with the signature of the Head Commissioner or of a Commissioner or Deputy Commissioner.

The officers in charge of the circles of issue are authorised to issue, from the office or offices established in their circles, currency notes in exchange for the amount thereof (1) in rupees or half-rupees or in gold coin which is legal tender under the Indian Coinage Act; or in rupees made under the Native Coinage Act, IX of 1876, and (2) on the requisition of the Comptroller General, to all treasuries, in gold coin which is not legal tender under the Coinage Act or gold bullion at the rate of one Government rupee for

7·53344 grains troy of fine gold. Currency notes can also be issued against gold coin of bullion or silver bullion or sterling securities held by the Secretary of State for India in Council.

### Notes when legal tender.

Every note is a legal tender in its own circle (except by Government at the office of issue) for the amount expressed in that note; that is to say, whenever a note forms the integral sum or a portion of any payment, either to Government on account of a revenue or other claim, or to any body corporate or person in British India, it is a legal tender. Five, ten, fifty and hundred rupee notes are legal tender throughout British India.

Notes of higher denominations than five, ten, fifty and hundred rupees are payable only at the office or offices of issue of the town from which they have been issued. In ordinary circumstances every Government treasury, of which there are about 250 in British India, cashes or exchanges notes if it can do so without inconvenience; and when this cannot be done conveniently for large sums, small sums can generally be exchanged for travellers.

### Reserve.

The whole amount of currency notes in circulation is secured by a reserve of gold and silver coin or bullion and securities of the Government of India or of the United Kingdom. The total amount of such securities is limited to 140 millions of rupees, of which not more than 40 millions of rupees may be in sterling securities. Under the Act of 1882 the maximum limit of the securities was fixed at sixty millions of rupees; but, the issues having largely expanded, the Government of India was empowered by Act XV of 1890 to raise the limit to eighty millions. The power was utilised to raise the invested reserve to seventy millions on the 19th December 1890, and to eighty millions a year later, on the 3rd December 1891. By notification No. 5366 of the 18th December 1896, the invested reserve was raised to one hundred millions, the power to do so having been given by Act XXI of 1896. Act III of 1905 raised the limit to 120 millions and in August of that year 20 millions of the reserve were invested by the Secretary of State in consols and exchequer bonds. In 1908-09 the exchequer bonds were replaced by Consols. By Act VII of 1911 the limit was raised further to 140 millions, and in April of that year 20 millions were invested by the Secretary of State in Consols.

### War Measures.

The permanent policy in regard to the invested portion of the Paper Currency Reserve has been left for future consideration, the war having followed too closely upon the report of the Currency Commission to warrant definite steps being taken now. Meantime steps have been taken to increase the maximum investments. As the result of difficulties which arose in 1914-15 in connection with the financing of the cotton crop, Government had to arrange to provide themselves with funds to support trade in general through the Presidency Banks. Power was taken at the beginning of 1915 to

increase the permissible investments in India on behalf of the Paper Currency Reserve by £4 millions. During the latter part of the official year 1915-16 there was a brisk demand for Council Bills, which could not be met from the treasury balances, owing to the large disbursements made in India on behalf of the Home Government. It therefore became desirable that Government should have the power of making this additional investment of £4 millions in London and they took the necessary power by Ordinance in January 1916. Towards the close of the year this Ordinance was replaced by a temporary Act (IX of 1916) which also authorised Government to make a yet further increase of £4 millions in the investment. Against the total power of £8 millions thus obtained investments of £4 millions were actually made in the financial year, being all in the form of Treasury Bills. The total investment permissible at the end of the financial year March 1916 was £17½ millions, or Rs 26 crores, against which the actual investments stood at Rs. 20 crores, of which one half was held in India and the other half in England.

#### Larger Investments.

It has already been explained that by Act IX of 1916 the Government of India took power to issue currency notes up to a maximum amount of six crores against British Treasury Bills of an equivalent value held by the Secretary of State. The reason for this was that when the Secretary of State in order to meet a strong trade demand for Council Bills sells bills in excess of his own requirements or the convenience of the Government of India, he can in normal conditions fall back upon the alternative of selling his bills against the Paper Currency Reserve, instead of against the Government of India's treasury balances. The payments made to him for the bills in London are then credited to the Paper Currency Reserve there in gold and the bills are paid from the funds held on account of this reserve in India. This process involves the ear-marking of such gold and in the financial situation created by the war the course was undesirable. For this reason it was decided to take a power to invest such funds in British treasury bills.

By a notification issued on November 13 the Government of India took power to increase such investments by an additional 12 crores of rupees, and on December 1914 a further Rs. 12 crores. It was pointed out that in spite of the assistance rendered by the heavy coinage of rupees undertaken in 1916 the Government of India were undertaking on behalf of the Home Government such heavy expenditure in this country that their balances would not be adequate to meet the trade demands for Council Bills. These additional powers were therefore taken in the hope that together with the assistance which might be anticipated from treasury balances later on in the year they will suffice to cover the sales of Council Bills during the remainder of the busy season. A promise was however given that in the event of this measure proving inadequate the Government would take such other steps which might be necessary for the purpose of enabling trade to bring out to India the funds required for trade purposes (g. v. India and the War-Finance).

#### Currency Chest.

Under the Gold Note Acts of 1898 and 1900, the Government of India had obtained authority to hold a part of the metallic portion of the reserve in gold coin (or temporarily in silver bullion) in London instead of in India. The object of these enactments was merely to afford temporary relief to the Indian money market in seasons of stress. A certain amount of gold had in this way been held in London during 1899 and 1900, but not to any large extent, and the occasion for doing so ceased, except in regard to gold in transit, from the middle of 1900. Act II of 1910, however, gives full power to hold the metallic portion of the reserve or any part of it, either in London or in India or partly in both places, and also in gold coin or bullion or in rupees or silver bullion, at the free discretion of Government subject only to the exception that rupees should be kept only in India and not in London. A currency chest was accordingly opened in London and a sum of £6,000,000 was remitted from India in pursuance of this policy, and a further sum of £1,045,000 was transferred to the chest from the Secretary of State's balances during the course of 1905-06. On the 31st March 1916 the London currency chest held £7,950,000 on behalf of the Currency Reserve.

#### Metallic Reserve.

The metallic reserve may consist of sovereigns, half sovereigns, rupees, and half rupees, and gold and silver bullion, the last named being valued at the sum spent on the purchase of such bullion. No gold was contained in the reserve between March 1876 and February 1898, and the quantity increased very slowly until February 1899, but from that date it rose rapidly till the end of March 1900 when it amounted to £7,500,012. Government then took measures to reduce what was considered to be an inconveniently large gold reserve, and at the end of March 1901 the value of the gold reserve had fallen to £5,778,518. In the next three years it again increased continuously from £7,023,921 at the end of 1901-02 to £9,859,564 at the end of 1902-03 and £10,789,567 at the end of 1903-04. During the next three years it remained practically steady, the amount held on the 31st March 1907 being £10,688,841. In 1907-08 the serious monetary crisis in America and the contraction in the exports from India owing to the famine led to a very large increase in the demand for gold at the Currency offices with the result that on the 31st March 1908 the value of the gold reserve had fallen to £8,417,841 inclusive of £3,705,000 held in England. Adverse trade conditions continued in 1908-09 and on the 31st March 1909 the gold reserve had dwindled down to £1,523,414, of which £1,500,000 was held in England. Normal conditions returned in 1909-10 and the stock of gold in the reserve rose to £8,701,716, on 31st March 1910. On March 31st, 1916, the Paper Currency Reserve was held in the following form: Silver in India £15,370,000; in England £340,000; total £15,710,000. Gold in India £8,041,000; in England £8,162,000; total £16,112,000. Securities in India £6,667,000; in England £6,667,000; total £13,334,000.

## Effect of the War.

It was explained in the last edition of the "Indian Year Book" that the outbreak of the war found the Government of India in such a strong position that it was equal to meeting with ease all the demands upon it. The second year of the war reinforced this contention. After the first shock of crisis credit and confidence rapidly returned. Although trade was hampered by various restrictions it showed great elasticity in adapting itself to the abnormal conditions prevailing. This is nowhere more marked than in the increase in the note circulation. During the year 1914-15 the active circulation, which had been steadily developing, showed a set-back. This was due as much to the slackness of trade and to the falling off in the demand for currency as to any decline of confidence in the note issue. Indeed some improvement in the active circulation was noticed towards the close of the year when this circulation stood at Rs. 44 crores. This movement continued throughout 1915-16, and was specially marked with the revival of trade in the closing months of the year. The note issue consequently soon assumed unprecedented proportions and stood at Rs. 53 crores at the end of March 1916.

Of recent years steps have been taken to increase the popularity of the Note issue. The first important measure was the universalisation of Notes up to Rs. 100, instead of confining the facilities for encashment to the circle of issue. In 1914-15 two other important steps were taken. It was decided not to re-issue Notes, and so to eliminate the worn and filthy paper that was sometimes found in circulation. Orders were also passed that Government Treasuries should freely exchange Notes for coins and *vice versa* up to the limit of their power. The introduction of an improved form of Note is under consideration. The Presidency Banks have also made arrangements for the free issue and encashment of universal notes, at many of their important branches at which Government Treasury business is conducted. At the close of the financial year, that is to say, March 31st, 1916, the actual state of the Paper Currency was as follows:—

	31st March 1916. Rs.
TOTAL CIRCULATION.. ..	67,73,34,540
Silver Coin in India.. ..	23,05,53,020
Gold Coin and Bullion in India .. ..	12,24,27,143
Gold Coin and Bullion in England .. ..	11,92,50,000
Silver Bullion in England .. ..	51,00,000
Securities held in India .. ..	9,99,99,946
Securities held in England .. ..	10,00,04,431
TOTAL RESERVE .. ..	87,73,34,540

It was the policy of the Government of India to give gold from the Paper Currency Reserve freely on demand. But when the war broke out, it became apparent that gold was being withdrawn from the Reserve not to meet legitimate demands, but to speculate: sovereigns were at a premium in the bazaar, and those who

commanded funds took sovereigns from the Paper Currency Reserve and sold them at a profit. Government accordingly declined to issue sovereigns in sums smaller than ten thousand pounds at a time, but as the speculators then clubbed together and formed syndicates to withdraw sovereigns, an absolute embargo was placed on the issue of gold. The effect of these withdrawals, of the abolition of the Silver Branch of the Gold Standard Reserve, and of the transfer of gold from the Paper Currency Reserve to the Gold Standard Reserve in payment of Reverse Councils is seen in the last official statement showing the composition of the Paper Currency Reserve:—

	25th of January 1917. Rs.
TOTAL CIRCULATION.. ..	83,40,17,570
Silver Coin in India .. ..	14,25,55,699
Gold Coin and Bullion in India .. ..	12,52,65,150
Silver bullion under Comptroller .. ..	2,43,54,883
Gold Coin and Bullion in England .. ..	11,17,50,000
Silver bullion in England .. ..	13,36,772
Securities held in India .. ..	9,99,99,946
Securities held in England .. ..	32,82,57,475
TOTAL RESERVE .. ..	83,35,19,875

## Interest.

The interest accruing on the invested reserve is entered in a separate account, and paid to the credit of the Government of India, under the head "Profits of note circulation." The interest on the invested reserve amounted in 1915-16 Rs. 46,43,585, the expenditure of the Department being Rs. 23,40,485 and the profit Rs. 23,40,485.

## Circulation.

The average monthly circulation of the notes has been in millions of rupees:—

Five years ending.. ..	1885-86	142.65
" " .. ..	1890-01	171.67
" " .. ..	1895-96	282.44
" " .. ..	1900-01	265.39
" " .. ..	1905-06	361.80
" " .. ..	1910-11	481.97
" " .. ..	1914-15	640.40
" " .. ..	1915-16	640.95

The gross circulation of each denominations of note on March 31st 1915 was as follows:—

	Rs.
5-rupee .. ..	4,493,230
10 " .. ..	18,803,430
20 " .. ..	24,842
50 " .. ..	449,005
100 " .. ..	2,088,915
500 " .. ..	46,861
1,000 " .. ..	89,875
10,000 " .. ..	12,670
Total pieces .. ..	25,958,637
Value .. ..	87,73,34,540

## The Gold Standard Reserve.

The Gold Reserve Fund was first started in the beginning of 1901 when the profits which had accrued from the coinage of rupees from April 1900 amounting to £3 millions were credited to the fund, gradually remitted to England from time to time and there invested in sterling securities. In the following years the demand for rupees for trade requirements necessitated further heavy coinage and the investments held in the Gold Reserve Fund rapidly swelled by the credit of the profits and the interest thereon and amounted at the close of 1905-06 to £12½ millions. During the latter half of this year, abnormal trade activity resulted in an unprecedented demand for silver currency and necessitated exceptionally heavy coinage in a short space of time. To avoid the possibility of a recurrence of similar inconvenience, a separate silver branch of the Gold Reserve Fund was formed and was brought up to its proposed limit of rupees 6 crores (£4 millions) by March 1907; and after being for a short time known as the "Gold and Silver Reserve Fund" it was finally named the Gold Standard Reserve. At the close of 1906-07, the Reserve contained nearly £17 millions, of which £12½ millions were held in securities, £4 millions in rupees in India and the rest in gold in India and as a book credit. It is not necessary in this report to recount the events of the latter half of 1907-08. It will be sufficient to mention that the sale in India during the first half of 1908-09 of sterling bills on London resulted in the withdrawal from circulation in India of some Rs. 12 crores, the equivalent being withdrawn in gold by the Secretary of State from the Reserve in London, securities to the value of over £8 millions being put on the market. By November 1908, the silver in the Reserve in India had reached 18·65 crores. The subsequent improvement in trade conditions necessitated a portion of this silver being transferred to the Paper Currency Department to meet notes and frequent similar transfers continued to be made, the account being adjusted by a transfer in the opposite direction in London, made in gold from the Currency Reserve held there to the Gold Standard Reserve. By March 1911, the silver branch in India contained only 2·90 crores and the balance remained at this figure till September 1912, when the resumption of coinage made it possible gradually to increase it up to Rs. 6 crores, of which 4½ were held in Bombay.

**Effects of the War**—The recommendations of the Currency Commission regarding the policy to be pursued towards the Gold Standard Reserve will be found explained in detail in the section Currency Commission (q. v.). Briefly, they were that the silver branch of the Reserve should be abolished, and the rupees in the Reserve transferred to the Paper Currency Reserve in exchange for an equivalent in gold; that a much larger gold holding, in liquid gold, should be aimed at; and that the Secretary of State should be prepared to sell sterling bills and telegraphic transfers on London, or Reverse Councils as they are sometimes called, on demand. Unfortunately the war broke out before there was time for this policy to be carried into effect, so the emergency found the

Reserve in a transition stage. The measures adopted were prompt and efficacious. The silver branch of the Reserve was abolished by transferring the rupees therein to the Paper Currency Reserve in exchange for an equivalent in sovereigns, so that the Reserve was composed entirely of gold and gold securities. After a brief interval, necessary to consult, the Secretary of State, who naturally had to colour his arrangements by the abnormal financial conditions prevailing in London, a notification was issued early in August 1914 to the effect that Government would be prepared to sell sterling bills and telegraphic transfers on London to the extent of a million sterling a week, at the following rates:—Bills 1·3-20 32d. and telegraphic transfers 1·3-27 32d. This at once steadied the exchanges, which whilst they have been sluggish, have not fallen below gold point. The appended tables will show the composition of the Gold Standard Reserve brought about by this policy, and the extent of the demand for sterling bills:—

**Strength of the Reserve.**—Details of the balance of the Gold Standard Reserve on the 31st March 1916:—

### In England—

	£
Estimated value on the 31st March 1916 of the Sterling Securities of the nominal value of £17,007,837 (as per details below) .. .. .	16,218,092
Cash placed by the Secretary of State in Council at short notice .. .. .	5,792,631

### In India—

Gold .. .. .	238,734
Temporary loan to Treasury	
Balances—India .. .. .	4,000,000
Book credit in Treasury Accounts—India .. .. .	1,326
<b>TOTAL .. .. .</b>	<b>26,251,383</b>

### Face Value.

£

### Details of Investments—

Local Loans 3 per cent. Stock .. .. .	200,000
Guaranteed 2½ per cent. Stock .. .. .	438,720
Transvaal Government 3 per cent. Guaranteed Stock .. .. .	1,002,023
Exchequer 3 per cent. Bonds .. .. .	6,644,000
Canada 3½ per cent. Bonds .. .. .	161,000
New South Wales, 3½ per cent. Stock .. .. .	113,000
British Treasury Bills .. .. .	4,485,000
National War Loan 4½ per cent. Stock .. .. .	3,874,094
Southern Nigeria 4 per cent. Bonds .. .. .	850,000

**TOTAL .. .. .** **17,007,837**



The balance of the Gold Standard Reserve on January 13, 1917, in India and in England, amounted to £25,714,059 and was held in the following form :—

	£
(1) Book Credit .. ..	8' 0,498
(2) Cash placed by the Secretary of State for India in Council at short notice .. ..	4,263,208
(3) Temporary loans to the Home Treasury balance ..	2,000,000
(4) Gold in India .. ..	1,045,000
(5) Temporary loans to Treasury balances in India ..	4,000,000
(6) Securities (estimated value)	16,468,576
	<hr/> 28,579,242

### Causes of the changes.

The marked difference in these two statements is explained by a financial communique which was published in September 1916. In order to meet the conditions set up by the outbreak of the war, Government in 1914 entered into substantial borrowing. It issued £7 millions of sterling Bills in London and it took a loan of £8 millions from the Gold Standard Reserve in India. As matters improved, these temporary commitments were reduced. Of the total loan from the Gold Standard Reserve £4 millions were repaid, and provision was made for the discharge of £1½ millions of the sterling Bills in London. Under the loan programme for 1916-17 the Government of India required to borrow Rs. 6 crores for their current requirements in India. In order to provide what practically amounted to unlimited conversion of rights of holders of 3 per cent. and 3½ per cent.

Government Paper in India, they offered to receive Rs. 12 crores, carrying an equivalent conversion right, and if this had been taken up the proceeds would have been used to discharge the balance of the loan from the Gold Standard Reserve. But owing to the competition of British Exchequer Bills, a little less than Rs. 7 crores was subscribed to the Conversion Loan in India. Consequently there were not available the funds with which to discharge the balance of the loan to the Gold Standard Reserve. The course of the exchanges however rendered this a matter of no urgency. The Reserve is primarily intended to maintain the sterling value of the rupee, by providing a gold reservoir from which to meet any demand for sterling exchange in the event of the balance of trade turning against India. Owing to the heavy expenditure on behalf of the Home Government in India, the magnitude of the demand for Indian produce, and the falling off in the exports from Great Britain to India in consequence of the reduction of production and the scarcity of freight, the balance of trade has been heavily in favour of India; the problem therefore has been to finance the rupee exchanges and not to prepare for a further demand for sterling exchange. In order to lighten the pressure on the London Money Market, the Government decided to discharge the whole of their floating debt in England. To do this they took a further loan from the Gold Standard Exchange of £4 millions, raising their borrowings again to £8 millions. The actual additions to the volume of the Reserve arose from the fact that the demand for currency, consequent in part of the disappearance of gold as a circulating medium owing to the appreciation of the sovereign, necessitated a heavy coinage of rupees. The profits on this, according to practice, were devoted to the Gold Standard Reserve.

**Sterling Bills.**—The following table shows the details of the weekly allotments since the reverse remittances were first offered :—

Date.	Offered.	Tendered.	Allotted.
	£	£	£
August 6, 1914 .. ..	1,000,000	1,091,000	1,000,000
" 13, 1914 .. ..	1,000,000	813,000	813,000
" 20, 1914 .. ..	1,000,000	632,000	632,000
" 27, 1914 .. ..	1,000,000	538,000	538,000
September 3, 1914 ..	1,000,000	474,000	474,000
" 10, 1914 .. ..	1,000,000	360,000	360,000
" 17, 1914 .. ..	1,000,000	335,000	335,000
" 24, 1914 .. ..	1,000,000	346,000	346,000
October 1, 1914 .. ..	1,000,000	355,000	355,000
" 8, 1914 .. ..	1,000,000	345,000	345,000
" 15, 1914 .. ..	1,000,000	601,000	601,000
" 22, 1914 .. ..	1,000,000	427,000	427,000
" 29, 1914 .. ..	1,000,000	177,000	177,000
November 5, 1914 ..	1,000,000	.....	.....
" 12, 1914 .. ..	1,000,000	94,000	94,000
" 19, 1914 .. ..	1,000,000	390,000	390,000
" 26, 1914 .. ..	1,000,000	560,000	560,000
December 3, 1914 ..	1,000,000	255,000	255,000
" 10, 1914 .. ..	1,000,000	371,000	371,000
" 17, 1914 .. ..	1,000,000	404,000	404,000
" 23, 1914 .. ..	1,000,000	170,000	170,000
" 30, 1914 .. ..	1,000,000	50,000	50,000

**Sterling Bills.**—The following table shows the details of the weekly allotments since the reverse remittances were first offered.—*continued.*

Date.					Offered.	Tendered.	Allotted.
					£	£	£
January	7, 1915	..	..	..	1,000,000	100,000	100,000
"	14, 1915	..	..	..	1,000,000	75,000	75,000
"	21, 1915	..	..	..	1,000,000	....	....
"	28, 1915	..	..	..	1,000,000	50,000	50,000
February	4, 1915	..	..	..	1,000,000	....	....
"	11, 1915	..	..	..	1,000,000	....	....
"	18, 1915	..	..	..	1,000,000	....	....
"	25, 1915	..	..	..	1,000,000	....	....
March	4, 1915	..	..	..	1,000,000	....	....
"	11, 1915	..	..	..	1,000,000	....	....
"	18, 1915	..	..	..	1,000,000	....	....
"	25, 1915	..	..	..	1,000,000	....	....
April	1, 1915	..	..	..	1,000,000	....	....
"	8, 1915	..	..	..	1,000,000	....	....
"	22, 1915	..	..	..	1,000,000	....	....
"	29, 1915	..	..	..	1,000,000	....	....
May	6, 1915	..	..	..	1,000,000	....	....
"	13, 1915	..	..	..	1,000,000	....	....
"	20, 1915	..	..	..	1,000,000	....	....
"	27, 1915	..	..	..	1,000,000	....	....
June	2, 1915	..	..	..	1,000,000	100,000	100,000
"	10, 1915	..	..	..	1,000,000	206,000	206,000
"	17, 1915	..	..	..	1,000,000	190,000	190,000
"	24, 1915	..	..	..	1,000,000	155,000	155,000
July	2, 1915	..	..	..	1,000,000	160,000	160,000
"	9, 1915	..	..	..	1,000,000	1,075,000	1,000,000
"	16, 1915	..	..	..	1,000,000	524,000	524,000
"	23, 1915	..	..	..	1,000,000	850,000	850,000
"	30, 1915	..	..	..	1,000,000	843,000	843,000
August	6, 1915	..	..	..	1,000,000	455,000	455,000
"	12, 1915	..	..	..	1,000,000	345,000	345,000
"	20, 1915	..	..	..	1,000,000	15,000	15,000
September	3, 1915	..	..	..	1,000,000	....	....
"	13, 1915	..	..	..	1,000,000	50,000	50,000
"	24, 1915	..	..	..	1,000,000	....	....
Oct	1, 1915	..	..	..	1,000,000	....	....
"	7, 1915	..	..	..	1,000,000	....	....

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1).

HEADS OF REVENUE.		1908-9.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
<b>PRINCIPAL HEADS OF REVENUE:</b>									
Land Revenue	..	19,759,060	21,332,141	20,877,521	20,764,697	21,232,468	21,301,575	21,221,539	21,734,900
Opium	..	5,884,788	5,534,683	7,521,962	5,961,278	5,134,392	1,624,878	1,572,218	1,881,200
Salt	..	3,274,159	3,319,518	3,175,950	3,391,212	3,334,374	3,445,305	3,910,790	3,490,500
Stamps	..	4,344,156	4,548,304	4,811,691	4,915,129	5,069,115	5,318,293	5,082,043	5,387,900
Excise	..	6,380,628	6,537,854	7,030,314	7,609,753	8,277,919	8,894,300	8,856,881	8,532,900
Provincial Rates	..	533,505	6,539,223	554,378	548,680	552,149	180,210	38,814	39,300
Customs	..	4,832,264	4,965,118	6,919,009	6,468,567	7,197,243	7,558,220	6,347,201	5,747,900
Assessed Taxes	..	1,533,419	1,735,964	1,393,301	1,652,878	1,742,397	1,950,250	2,037,793	2,021,600
Forest	..	1,700,494	1,735,386	1,829,537	1,952,179	2,133,006	2,229,872	1,880,652	2,002,300
Registration	..	430,936	430,377	423,855	443,862	482,022	518,962	485,295	509,900
Tributes from Native States	..	529,636	588,307	607,447	595,005	622,542	616,881	609,827	605,200
<b>TOTAL</b>		49,294,535	51,089,875	55,046,985	54,203,240	55,838,830	53,728,746	52,741,993	51,953,500
<b>INTEREST</b>	..	987,225	1,184,343	1,465,439	1,448,741	1,473,708	1,852,119	1,023,307	1,076,000
<b>POST OFFICE</b>	..	1,823,620	1,921,229	1,996,922	2,134,279	2,292,436	2,410,210	(c)	3,764,800
<b>TELEGRAPH</b>	..	978,097	902,351	997,159	1,087,425	1,174,124	1,188,309	69,498	74,000
<b>MINT</b>	..	102,654	125,953	196,110	367,100	437,359	339,841		
<b>RECEIPTS BY CIVIL DEPARTMENTS:</b>									
Law and Justice	..								
Courts of Law	..	230,117	293,339	310,663	323,660	332,051	373,791	404,563	401,000
Jails	..	246,234	230,155	237,791	253,354	270,082	288,448	296,334	293,500
Police	..	153,123	148,950	155,373	122,738	135,533	140,136	141,281	140,200
Ports and Pilotage	..	139,988	140,083	146,531	151,737	156,746	153,609	140,339	129,800
Education	..	158,430	165,975	183,636	205,610	226,126	247,905	266,250	293,500
Medical	..	56,749	58,235	63,697	66,847	82,505	80,388	84,758	87,500
Scientific and other Minor Departments..	..	106,536	109,438	113,432	114,135	111,804	133,806	(a) 63,217 (b) 08,173	75,000
<b>TOTAL</b>		1,145,977	1,146,075	1,211,123	1,238,131	1,334,847	1,408,286	1,505,120	1,546,300
<b>MISCELLANEOUS RECEIPTS:</b>									
Grants in aid of Superannuation, &c.	..	195,011	192,086	195,489	201,470	200,386	206,910	213,235	213,900
Money and Printing	..	95,568	95,324	97,656	96,391	92,078	93,416	97,594	91,200
Message	..		44,481	70,084	100,879	105,697	119,741	172,919	76,700
Various	..	283,126	373,997	314,662	409,018	371,864	352,612	365,192	263,300
<b>TOTAL</b>		573,705	705,888	677,891	813,076	765,207	772,579	677,750	645,100
<b>(a) Agriculture.</b>									
<b>(b) Scientific and Miscellaneous Departments.</b>									
<b>(c) Posts and Telegraphs.</b>									

## GROSS REVENUE IN INDIA AND ENGLAND: IN £ (15 RUPEES=£1)—(contd.)

HEADS OF REVENUE.		1909-0.	1900-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
		£	£	£	£	£	£	£	£
<b>RAILWAYS:</b>									
State Railways (Gross Receipts) .. ..		26,799,888	28,923,931	30,629,756	33,579,129	36,680,364	37,546,135	36,105,167	37,702,200
<b>Deduct—</b>									
Working Expenses and Surplus Profits paid to Companies.		16,913,089	16,536,801	16,787,641	17,745,049	19,391,729	20,013,602	20,376,709	20,455,300
<b>Net Receipts</b>									
Guaranteed Companies (Net Traffic Receipts) ..		9,886,799	12,387,130	13,842,115	15,834,080	17,294,635	17,532,533	15,728,458	17,246,900
Subsidized Companies (Government share of Surplus Profits and Repayment of Advances of Interest).		—961 72,203	—48 58,296	—48 39,346	—48 57,615	3,980 73,174	93,101	70,691	92,400
<b>TOTAL</b>		9,958,041	12,445,378	13,881,461	15,891,725	17,371,789	17,625,634	15,799,149	17,339,300
<b>IRRIGATION:</b>									
Major Works:									
Direct Receipts .. ..		2,247,624	2,307,077	2,288,031	2,381,533	2,607,478	2,785,966	2,758,490	2,758,300
Portion of Land Revenue due to Irrigation ..		1,091,044	1,117,388	1,178,005	1,351,465	1,538,245	1,684,374	1,867,864	1,734,000
Minor Works and Navigation .. ..		219,334	235,691	228,465	247,034	265,494	262,819	254,615	267,500
<b>TOTAL</b>		3,558,002	3,660,156	3,694,521	3,980,052	4,411,217	4,713,159	4,880,969	4,759,800
<b>OTHER CIVIL PUBLIC WORKS</b>		287,938	268,786	293,833	326,924	353,447	298,640	288,219	298,500
<b>RECEIPTS BY MILITARY DEPARTMENT:</b>									
Army:									
Effective .. ..		764,740	875,557	948,154	1,061,030	1,107,244	1,080,631	971,846	774,000
Non-effective .. ..		98,199	102,171	110,495	118,336	120,559	122,875	124,345	119,400
<b>Marine</b>		862,939	977,728	1,058,649	1,179,366	1,227,803	1,203,506	1,096,191	893,490
<b>Military Works</b>		125,448	83,460	91,787	84,900	87,669	89,542	198,115	193,700
		59,254	75,773	70,593	78,791	72,162	76,604	80,382	86,000
<b>TOTAL</b>		1,047,641	1,136,961	1,221,029	1,343,057	1,387,634	1,369,652	1,374,688	1,173,100
<b>TOTAL REVENUE</b>		69,761,535	74,593,495	80,682,473	82,835,750	86,862,598	85,207,175	81,157,666	82,620,400

## The Currency Commission.

The Royal Commission on Indian Currency and Finance was appointed in April 1913, in order to inquire into certain questions arising out of the management of the Indian currency system and the control of Indian finance. For some years, and particularly since the American crisis of 1907, when the Indian currency system was severely tried, much criticism had been levelled against the manner in which the principles laid down by the Fowler Committee of 1899 had been developed, and against the extent to which Indian funds and reserves had been drawn to London. These criticisms were brought to a head when strong complaint was made in Parliament of the agency through which large purchases of silver were made for the Government of India in 1912.

It was to settle these issues that the Commission was appointed, and it took evidence throughout the latter part of the year 1913.

**The Report.**—The report was dated February 24th, 1914, some delay occurring through the necessity of referring it to Sir Henry Chalmers, who had taken up his post as Governor of Ceylon, and Sir Shapurji Broacha, who had been obliged to return to Bombay on account of the severe financial crisis consequent on the failure of certain of the swadeshi banks. The report was long and detailed, so the Commission furnished a summary of it, which condensed their opinions and recommendations in the following passages:—

1. The establishment of the exchange value of the rupee on a stable basis has been and is of the first importance to India.
2. The measures adopted for the maintenance of the exchange value of the rupee have been necessarily and rightly rather supplementary to, than in all respects directly in pursuance of, the recommendations of the Committee of 1898.
3. These measures worked well in the crisis of 1907-08, the only occasion upon which they have been severely tested hitherto.
4. The time has now arrived for a reconsideration of the ultimate goal of the Indian Currency system. The belief of the Committee of 1898 was that a Gold Currency in active circulation is an essential condition of the maintenance of the Gold Standard in India, but the history of the last 15 years shows that the Gold Standard has been firmly secured without this condition.
5. It would not be to India's advantage to encourage an increased use of gold in the internal circulation.
6. The people of India neither desire nor need any considerable amount of gold for circulation as currency, and the currency most generally suitable for the internal needs of India consists of rupees and notes.
7. A mint for the coinage of gold is not needed for purposes of currency or exchange, but if Indian sentiment genuinely demands it and the Government of India are pre-

pared to incur the expense, there is no objection in principle to its establishment either from the Indian or from the Imperial standpoint; provided that the coin minted is the sovereign (or the half-sovereign); and it is pre-eminently a question in which Indian sentiment should prevail.

8. If a mint for the coinage of gold is not established, refined gold should be received at the Bombay Mint in exchange for currency.
9. The Government should continue to aim at giving the people the form of currency which they demand, whether rupees, notes or gold, but the use of notes should be encouraged.
10. The essential point is that this internal currency should be supported for exchange purposes by a thoroughly adequate reserve of gold and sterling.
11. No limit can at present be fixed to the amount up to which the Gold Standard Reserve should be accumulated.
12. The profits on coinage of rupees should for the present continue to be credited exclusively to the Reserve.
13. A much larger proportion of the Reserve should be held in actual gold. By an exchange of assets between this Reserve and the Paper Currency Reserve, a total of about £10,000,000 in gold can be at once secured. This total should be raised as opportunity offers to £15,000,000 and thereafter the authorities should aim at keeping one-half of the total Reserve in actual gold.
14. The Indian branch of the Gold Standard Reserve in which rupees are now held should be abolished, the rupees being handed over to the Paper Currency Reserve in exchange for gold.
15. The proper place for the location of the whole of the Gold Standard Reserve is London.
16. The Government should definitely undertake to sell bills in India on London at the rate of 1s. 3 29-32d. per rupee whenever called upon to do so.
17. The Paper Currency system of India should be made more elastic. The fiduciary portion of the note issue should be increased at once from 14 crores to 20 crores, and thereafter fixed at a maximum of the amount of notes held by Government in the Reserve Treasuries plus one-third of the net circulation, and the Government should take power to make temporary investments or loans from the fiduciary portion within this maximum in India and in London, as an alternative to investment in permanent securities.
18. We recommend the immediate universalisation of the 500 rupee note and the increase of the facilities for the encashment of notes.

19. The aggregate balances in India and London in recent years have been unusually large. This has been due mainly, though not entirely, to accidental causes and to the exceptional prosperity of India.
20. Caution is justifiable in framing Budgets in India, but has been carried rather further than was necessary in recent years.
21. A change in the date of the commencement of the financial year from the 1st April to the 1st November or the 1st January would probably enable the Government of India to frame more accurate Budgets. Such a change would also enable the India Office to fix the amount of their borrowings in London with closer regard to immediate needs. We commend this proposal for favourable consideration.
22. The practice of transferring revenue surpluses to London to be used in avoiding or reducing fresh borrowings for capital expenditure has been thoroughly justified in the interest of India, and the Secretary of State has made good use, for this purpose or for actual reduction of debt, of the balances from time to time accumulated in his hands.
23. But the recommendations which we make as regards loans by Government in India may lead to a revision of the occasions though not of the extent, of transfers of money to London.
24. The independent Treasury system of the Indian Government is not an ideal one. It is partly responsible for the stringency which recurs annually in the Indian money markets.
25. We recommend that the Government of India should make a regular practice of granting loans to the Presidency Banks from their surplus balances in India against security on terms to be negotiated with the Presidency Banks.
26. In deciding upon the location of surplus balances, the Government of India and the Secretary of State should act in consultation, and, while the transmission of the necessary funds to London at favourable rates of exchange is the first consideration, the authority should have regard to all the factors including the possibility of utilising surplus balances for loans in India.
27. In carrying out these recommendations, the authorities should proceed tentatively and with caution.
28. We recommend that the amount of the annual rupee loans in India should be increased as much as possible. The figures of recent loans appear to have been somewhat over cautious. We call attention to the questions of relaxing present regulations in regard to endorsements on rupee paper and of creating new forms of securities.
29. The Secretary of State sells Council Drafts, not for the convenience of trade, but to provide the funds needed in London to meet the requirements of the Secretary of State on India's behalf.
30. The India Office perhaps sold Council Drafts unnecessarily at very low rates on occasions when the London balance was in no need of replenishment, but we do not recommend any restrictions upon the absolute discretion of the Secretary of State as to the amount of drafts sold or the rate at which they are sold, provided that it is within the gold points. The amount and occasion of sales should be fixed with reference to the urgency of the Government's requirements and the rate of exchange obtainable, whether the drafts are against Treasury balances or against the Reserves.
31. There has been some excess of caution in the renewal of debt by the India Office during recent years.
32. The system of placing portions of the India Office balance out on short loan with approved borrowers in the city of London is on the whole well managed, but we draw attention to—
  - (a) The term for which loans are made.
  - (b) The desirability of giving greater publicity to the methods by which admission is gained to the list of approved borrowers.
  - (c) Some defects in the list of approved securities and especially its narrow range.
33. There is no ground for the suggestion that the City members of the Secretary of State's Council showed any kind of favouritism in placing on deposit with certain banks, with the directorates of which they were connected, a part of the India Office balance at a time when it was too large to be placed entirely with the approved borrowers. But we call the attention of the Secretary of State to the desirability of avoiding as far as possible all occasion for such criticism, though it may be founded on prejudice and ignorance of the facts.
34. We observe that in our opinion the time has come for a general review of the relations of the India Office to the Bank of England.
35. The working of the present arrangements for the remuneration of the Secretary of State's broker should be watched, and if necessary they should be revised.
36. We record our high opinion of the way in which the permanent staff, both in India and in London, have performed the complicated and difficult financial duties placed upon them.
37. We recommend a continuance of a Finance Committee of Council as providing the machinery most suitable for the work required.
38. The Finance Committee should, if possible, contain three members with financial experience, representing—
  - (a) Indian Official Finance.
  - (b) Indian Banking and Commerce.
  - (c) The London Money Market.

In any case there should be at least one member with Indian financial experience. The absence of any representative of Indian finance on the Committee since 1911 has resulted in giving undue prominence to the representation of London City experience.

39. While we suggest that the changes recently proposed and now under discussion in the constitution of the India Council may require some modification in order to provide for the continuance of a Finance Committee of Council, we are in sympathy with the desire for expediting financial business, which is one of the objects in view.
40. The present arrangement under which the Assistant Under Secretary of State, having financial experience, is able to share with the Financial Secretary the responsibility for financial business in the India Office has many advantages. For the future we recommend that either (1). the Under Secretary or Assistant Under Secretary of State should have financial experience as at present, or (2) there should be two Assistant Under Secretaries, of whom one should have financial experience.
41. We are not in a position to report either for or against the establishment of a State or Central Bank, but we regard the subject as one which deserves early and careful consideration, and suggests the appointment of a small expert committee to examine the whole question in India, and either to pronounce against the proposal or to work out in full detail a concrete scheme capable of immediate adoption.

**A Note of Dissent.**—The report was signed by Sir James Begbie subject to a note of dissent. In this he pointed out that the currency policy directed to the attainment of stability in the exchange value of the rupee by means of gold reserves collected from the profits realised on the coinage of rupees had brought into existence an extensive token currency, which was not a desirable form of currency for a country which absorbs gold on a very large scale. Sir James Begbie therefore held the view.

"That the true line of advance for the currency policy is to discourage an extension of the token currency by providing increased facilities for the distribution of gold when further increases in the currency become necessary. These greater facilities should, I consider, include the issue of gold coins from an Indian mint of a value more suitable for general currency use than the sovereign and half-sovereign, for the purpose of assisting the distribution of gold when, as is frequently the case, the balance of trade is strong in India's favour and gold arrives in considerable quanti-

ties. I also think that supplies of gold coins should be laid down in the up-country districts with the object of giving the general public effective opportunities of obtaining gold coins.

Action on the report as a whole has been deferred until after the termination of the war—indeed it is doubtful if any sort of general pronouncement will be made on the report, because of the great changes effected by the war—partial action has been taken in order to meet immediate necessities. Thus in 1914 the silver branch of the Gold Standard Reserve was abolished, the rupees held in that reserve being exchanged for an equivalent in gold taken from the Paper Currency Reserve. The Gold Standard Reserve—it is sometimes called the Gold Reserve Fund—now consists entirely of gold and gold securities. In 1914 a Notification was issued guaranteeing to issue sterling drafts on the Secretary of State in London—these are called for convenience Reverse Councils—at gold export point on demand. The extent of this demand will be found in the section dealing with the Paper Currency and the Gold Standard Reserve (see ante). Another important step was taken by the Secretary of State when he announced that he had exchanged the Consol holding in the Gold Standard Reserve for the new four and a half per cent. loan. The official communique said:—"the Secretary of State has converted the entire holdings of Consols in the Gold Standard Reserve amounting to £3,266,391 into stock of the new war loan to the value of £2,177,594. This has been done partly by the acquisition of conversion rights from the public and to a smaller extent by a direct tender for the new loan." In the autumn of 1914, when there seemed to be every likelihood of a complete break in the price of cotton unless special steps were taken to enable holders to carry the crop, the Government of India stiffened the money market by offering the Presidency Banks loans from the Paper Currency Reserve in order to assist in the financing of threatened trades. This help was not needed, because cotton recovered its value with surprising celerity, and there has been a surplus, rather than a deficiency of money. The invested portion of the Paper Currency Reserve has been increased. The question of a State Bank is abeyance. When the scheme was first mooted its reception was generally hostile. It was impossible to see how the interests of the three Presidency Banks and of the large Joint Stock and Exchange Banks could be reconciled with a great State institution. Since then there has been a certain revision of feeling, though opinion is still nicely divided, and there are many who, whilst not hostile to a State Bank *per se*, are inclined to think that Government can be of more assistance in time of crisis by remaining outside banking and placing its resources at the disposal of the market through the Presidency Banks in time of pressure.

The history of Indian Railways very closely reflects the financial vicissitudes of the country. Not for some time after the establishment of Railways in England was their construction in India contemplated, and then to test their applicability to Eastern conditions three experimental lines were sanctioned in 1845. These were from Calcutta to Raniganj (120 miles), the East Indian Railway; Bombay to Kalyan (33 miles), Great Indian Peninsula Railway; and Madras to Arkonam (39 miles), Madras Railway. Indian Railway building on a serious scale dates from Lord Dalhousie's great minute of 1853, wherein, after dwelling upon the great social, political and commercial advantages of connecting the chief cities by rail, he suggested a great scheme of trunk lines linking the Presidencies with each other and the inland regions with the principal ports. This reasoning commended itself to the Directors of the East India Company, and it was powerfully reinforced when, during the Mutiny, the barriers imposed on free communication were severely felt. As there was no private capital in India available for railway construction, English Companies, the interest on whose capital was guaranteed by the State, were formed for the purpose. By the end of 1859 contracts had been entered into with eight companies for the construction of 5,000 miles of line, involving a guaranteed capital of £52 millions. These companies were (1) The East Indian; (2) the Great Indian Peninsula; (3) the Madras; (4) the Bombay, Baroda and Central India; (5) the Eastern Bengal; (6) the Indian Branch, now the Oudh and Rohilkund State Railway; (7) the Sind, Punjab and Delhi, now merged in the North Western State Railway; (8) the Great Southern of India, now the South Indian Railway. The scheme laid the foundations of the Indian Railway system as it exists to-day.

## Early Disappointments.

The main principle in the formation of these companies was a Government guarantee on their capital, for this was the only condition on which investors would come forward. This guarantee was five per cent, coupled with the free grant of all the land required; in return the companies were required to share the surplus profits with the Government, after the guaranteed interest had been met; the interest charges were calculated at 22½ to the rupee; the Railways were to be sold to Government on fixed terms at the close of twenty-five years and the Government were to exercise close control over expenditure and working. The early results were disappointing. Whilst the Railways greatly increased the efficiency of the administration, the mobility of the troops, the trade of the country, and the movement of the population, they failed to make profits sufficient to meet the guaranteed interest. Some critics attributed this to the unnecessarily high standard of construction adopted, and to the engineers' ignorance of local conditions. The result was that by 1869 the deficit in the Railway budget was Rs. 16½ lakhs. Seeking for some more economical method of construction; the Government

secured sanction to the building of lines by direct State Agency, and funds were allotted for the purpose, the metre gauge being adopted for cheapness. Funds soon lapsed and the money available had to be diverted to converting the Sind and Punjab lines from metre to broad-gauge for strategic reasons. Government had therefore again to resort to the system of guarantee, and the Indian Midland (1882-85), since absorbed by the Great Indian Peninsula; the Bengal-Nagpur (1883-87), the Southern Maratha (1882), and the Assam-Bengal (1891) were constructed under guarantees, but on easier terms than the first companies. Their total length was over 4,000 miles.

## Famine and Frontiers.

In 1879, embarrassed by famine and by the fall of the exchange value of the rupee, Government again endeavoured to enlist unaided private enterprise. Four companies were promoted.—the Nilgiri, the Delhi-Umballa-Kalka, the Bengal Central, and the Bengal North-Western. The first became bankrupt, the second and third received guarantees, and the Tirhut Railway had to be leased to the fourth. A step of even greater importance was taken when Native States were invited to undertake construction in their own territories, and the Nizam's Government guaranteed the interest on 330 miles of line in the State of Hyderabad. This was the first of the large system of Native State Railways. In the first period up to 1870, 4,255 miles were opened, of which all save 45 were on the broad gauge; during the next ten years there were opened 4,239, making the total 8,494 (on the broad gauge, 6,562, the metre 1,865, and narrow 67). Then ensued a period of financial ease. It was broken by the fall in exchange and the costly lines built on the frontier. The Penjdeh incident, which brought Great Britain and Russia to the verge of war, necessitated the connection of our outposts at Quetta and Chaman with the main trunk lines. The sections through the desolate Harnai and Bolan Passes were enormously costly; it is said that they might have been ballasted with rupees; the long tunnel under the Khojak Pass added largely to this necessity, but unprofitable outlay.

## Rebate Terms Established.

This induced the fourth period—the system of rebates. Instead of a gold subsidy, companies were offered a rebate on the gross earnings of the traffic interchanged with the main line, so that the dividend might rise to four per cent. but the rebate was limited to 20 per cent. of the gross earnings. Under these conditions, there were promoted the Ahmedabad-Prantel, the South Behar, and the Southern Punjab, although only in the case of the first were the terms strictly adhered to. The Baral Light Railway, on the two feet six inches gauge, entered the field without any guarantee, and with rolling stock designed to illustrate the carrying power of this gauge. The rebate terms being found unattractive in view of the competition of 4 per cent. trustee stocks, they were revised in 1896 to provide for an

\* The Railway Administration Report for 1915-16 was not available at the date of going to press.



absolute guarantee of 3 per cent. with a share of surplus profits, or rebate up to the full extent of the main line's net earnings in supplement of their own net earnings, the total being limited to 3½ per cent. on the capital outlay. Under these terms, a considerable number of feeder line companies was promoted, though in none were the conditions arbitrarily exacted. As these terms did not at first attain their purpose, they were further revised, and in lieu was substituted an increase in the rate of guarantee from 3 to 3½ per cent. and of rebate from 3½ to 5 per cent. with equal division of surplus profits over 5 per cent. in both cases. At last the requirements of the market were met, and there has since been a mild boom in feeder railway construction and the stock of all the sound companies promoted stands at a substantial premium.

### Railway Profits Commence.

Meantime a much more important change was in progress. The gradual economic development of the country vastly increased the traffic, both passenger and goods. The falling in of the original contracts allowed Government to renew them on more favourable terms. The development of irrigation in the Punjab and Sind transformed the North-Western State Railway. Owing to the burden of maintaining the unprofitable Frontier lines, this was the Chinderella Railway in India—the scapegoat of the critics who protested against the unwisdom of constructing railways from borrowed capital. But with the completion of the Chenab and Jhelum Canals, the North-Western became one of the great grain lines of the world, choked with traffic at certain seasons of the year and making a large profit for the State. In 1900 the railways for the first time showed a small gain to the State. In succeeding years the net receipts grew rapidly. In the four years ended 1907-08 they averaged close upon £2 millions a year. In the following year there was a relapse. Bad harvests in India, accompanied by the monetary panic caused by the American financial crisis, led to a great falling off in receipts just when working expenses were rising, owing to the general increase in prices. Instead of a profit, there was a deficit of £1,240,000 in the railway accounts for 1908-09. But in the following year there was a reversion to a profit, and the net Railway gain has steadily increased. For the year ended March 1913 this gain amounted to £5·49 millions (Rs. 823 lakhs). Although in a country like India, where the finances are mainly dependent upon the character of the monsoon, the railway revenue must fluctuate, there is no reason to anticipate a further deficit, but every ground for hoping that the railway profits will fill the vacuum in the Indian revenues caused by the cessation of the opium trade with China.

### Contracts Revised.

A very important factor in this changed position is the revision of the original contracts under which the guaranteed lines were constructed. The five per cent. dividend, guaranteed at 22½ per rupee, and the half-yearly settlements made these companies a drain on the State at a time when their stock was at a high premium. The first contract

to fall in was the East Indian, the great line connecting Calcutta with Delhi and the Northern provinces. When the contract lapsed, the Government exercised their right of purchasing the line, paying the purchase-money in the form of terminable annuities, derived from revenue, carrying with them a sinking fund for the redemption of capital. The railway thus became a State line, but it was released to the Company which actually works it. Under these new conditions the East Indian Company brought to the State in the ten years ended 1909, after meeting all charges, including the payments on account of the terminable annuity by means of which the purchase of the line was made, and interest on all capital outlay subsequent to the date of purchase, a clear profit of nearly ten millions. At the end of seventy-four years from 1880, when the annuity expires, the Government will come into receipt of a clear yearly income of upwards of £2,700,000, equivalent to the creation of a capital of sixty to seventy millions sterling. No other railway shows results quite equal to the East Indian, because, in addition to serving a rich country by an easy line, it possesses its own collieries and enjoys cheap coal. But with allowance for these factors, all the other guaranteed companies which have been acquired under similar conditions as their contracts expired, have proportionately swelled the revenue and assets of the State. It is difficult to estimate the amount which must be added to the capital debt of the Indian railways in order to counterbalance the loss during the period when the revenue did not meet the interest charges. According to one estimate it should be £50 millions. But even if that figure be taken, Government have a magnificent asset in their railway property.

### Improving Open Lines.

These changes induced a corresponding change in Indian Railway policy. Up to 1900 the great work had been the provision of trunk lines. But with the completion of the Nagda-Muttra line, providing an alternative broad gauge route from Bombay to Delhi through Eastern Rajputana, the trunk system was virtually complete. A direct broad gauge route from Bombay to Sind is needed, but chiefly for strategic purposes. The poor commercial prospects of the line and the opposition of the Rao of Cutch to any through line in his territories, keep this scheme in the background. There does not exist any through rail connection between India and Burma, although several routes have been surveyed: the mountainous character of the region to be traversed, and the easy means of communication with Burma by sea, rob this scheme of any living importance. Further Survey work was undertaken in November 1914, the three routes to be surveyed being the coast route, the Manipur route, and the Hukong valley route. The metre gauge systems of Northern and Southern India must also be connected and Karachi given direct broad-gauge connection with Delhi, a project that is now under investigation. But these works are subordinate to the necessity for bringing the open lines up to their traffic requirements and providing them with feeders. The sudden in-

crease in the trade of India found the main lines totally unprepared. Costly works were necessary to double lines, improve the equipment, provide new and better yards and terminal facilities and to increase the rolling stock. Consequently the demands on the open lines have altogether overshadowed the provision of new lines. Even then the railway budget was found totally inadequate for the purpose, and a small Committee sat in London, under the chairmanship of Lord Inchcape, to consider ways and means. This Committee found that the amount which could be remuneratively spent on railway construction in India was limited only by the capacity of the money market. They fixed the annual allotment at £12,000,000 a year. Even this reduced sum cannot always be provided.

## Government Control.

As the original contracts carried a definite Government guarantee of interest, it was necessary for Government to exercise strong supervision and control over the expenditure during construction, and over management and expenditure after the lines were open for traffic. For these purposes a staff of Consulting Engineers was formed, and a whole system of checks and counterchecks established, leading up to the Railway Branch of the Public Works Department of the Government of India. As traffic developed, the Indian Railways outgrew this dry nursing, and when the original contracts expired, and the interests of Government and the Companies synchronised, it became not only vexatious but unnecessary. Accordingly in 1901-02 Mr. Thomas Robertson was deputed by the Secretary of State to examine the whole question of the organisation and working of the Indian Railways, and he recommended that the existing system should be replaced by a Railway Board, consisting of a Chairman and two members with a Secretary. The Board was formally constituted in March 1905. The Board is outside, but subordinate to the Government of India in which it is represented by the Department of Commerce and Industry. It prepares the railway programme of expenditure and considers the greater questions of policy and economy affecting all the lines. Its administrative duties include the construction of new lines by State agency, the carrying out of new works on open lines, the improvement of railway management with regard both to economy and public convenience, the arrangements for through traffic, the settlement of disputes between lines, the control and promotion of the staff on State lines, and the general supervision over the working and expenditure of the Company's lines. Two minor changes have taken place since the constitution of the Railway Board. In 1908, to meet the complaint that the Board was subjected to excessive control by the Department of Commerce and Industry, the powers of the Chairman were increased and he was given the status of a Secretary to Government with the right of independent access to the Viceroy; he usually sits in the Imperial Legislative Council as the representative of the Railway interest. In 1912 in consequence of complaints of the excessive interference of the

Board with the Companies, an informal mission was undertaken by Lord Inchcape to reconcile differences. The constitution of the Board is now undergoing further inquiry, and the development generally favoured in the establishment of a Railway Member of the Viceroy's Executive Council.

## Management.

The Railways managed by Companies have Boards of Directors in London. They are represented in India by an Agent, who has under him a Traffic Manager, a Chief Engineer, a Locomotive Superintendent, a Storekeeper, a Police Superintendent, (who is appointed by Government), and an Auditor. The State Railways are similarly organised.

## Clearing House.

Proposals have several times been made for the establishment of a Clearing House but the distances are too great. The work which would ordinarily be done by the Clearing House is done by the Audit Office of each Railway.

## The Railway Conference.

In order to facilitate the adjustment of domestic questions, the Railway Conference was instituted in 1876. This Conference was consolidated into a permanent body in 1903 under the title of the Indian Railway Conference Association. It is under the direct control of the railways, it elects a President from amongst the members, and it has done much useful work.

## The Indian Gauges.

The standard gauge for India is five feet six inches. When construction was started the broad gauge school was strong, and it was thought advisable to have a broad gauge in order to resist the influence of cyclones. But in 1870, when the State system was adopted it was decided to find a more economical gauge, for the open lines had cost £17,000 a mile. After much deliberation, the metre gauge of 3 feet 3½ inches was adopted, because at that time the idea of adopting the metric system for India was in the air. The original intention was to make the metre gauge lines provisional; they were to be converted into broad gauge as soon as the traffic justified it; consequently they were built very light. But the traffic expanded with surprising rapidity, and it was found cheaper to improve the carrying power of the metre gauge lines than to convert them to the broad gauge. So, except in the Indus Valley, where the strategic situation demanded an unbroken gauge, the metre gauge lines were improved and they become a permanent feature in the railway system. Now there is a great metre gauge system north of the Ganges connected with the Rajputana lines and Kathiawar. Another system in Southern India embracing the Southern Maratha and the South India Systems. These are not yet connected, but the necessary link from Khandwa by way of the Nizam's Hyderabad-Godaveri Railway, cannot be long delayed. All the Burma lines are on the metre gauge. Since the opening of the Barak line, illustrating the capacity of the two feet six inch gauge; there has been developed a tendency to construct feeders on this rather than on the metre gauge.

## STATISTICAL POSITION.

In the report on the administration of the Indian railways for the year 1914-15 an important departure is made. The whole history of the Indian railway system is reviewed, and the process which led to its evolution is expounded. The difference between State-owned and State-managed lines, between State-owned and company managed lines, and between private lines and those constructed under Branch Line terms is explained. This history is to be included in all subsequent reports, and should be studied by those who are in need of further information in the details of the Indian system.

**Capital.**—The actual capital outlay (booked cost) on lines in which the State is financially interested (excluding premia for the purchase of Companies' lines) from the commencement of operations on all lines open at the close of the year 1914-15 amounted to Rs. 4,61,89,79 lakhs and on lines then under construction to Rs. 3,08,19 lakhs. In addition Rs. 91,37 lakhs were expended on miscellaneous items. The

total outlay thus amounted to Rs. 4,65,89,35 lakhs.

The actual expenditure during 1914-15, amounted to Rs. 17,15 lakhs, distributed as follows:—

	Rs.
Open lines, including suspense ..	6,71,93,000
New Lines .. .. .	1,34,81,000
Rolling Stock .. .. .	9,07,99,000

TOTAL .. 17,14,73,000

## Results of Working.

The financial result of the working of the State Railways during the year 1914-15 is a return of Rs. 483 lakhs. Out of this a sum of Rs. 150 lakhs (£1,002 thousand) was expended in the form of annuity payments in redemption of capital.

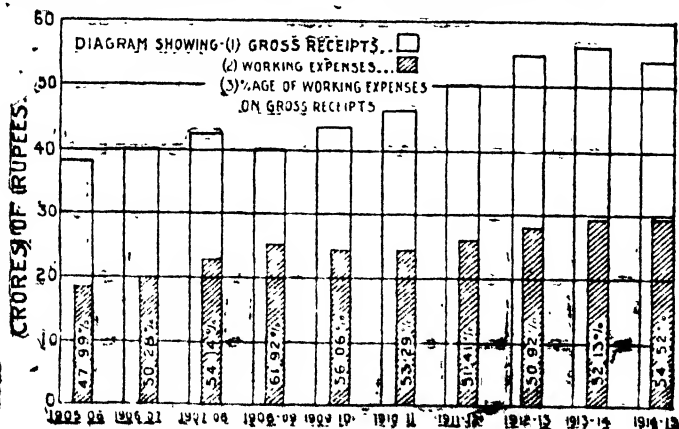
## Yield Per Cent.

The gross earnings of all Indian railways during the year 1914-15 amounted in round figures to Rs. 6,042.01 lakhs, compared with Rs. 6,358.56 lakhs in 1913-14, being a decrease of Rs. 316.5 lakhs, while the working expenses were only Rs. 18.84 lakhs less than in 1913-14. The net earnings amounted to Rs. 2,707.91 lakhs against Rs. 3,085.02 lakhs in 1913-14 or a decrease of Rs. 297.71 lakhs. These net earnings yielded a return on the capital outlay (Rs. 51,922.13 lakhs) on open lines, i.e., on mileage earning revenue, of 5.33 per cent., as compared with 6.19 per cent., in 1913-14. The corresponding actual return per cent. for the previous years is compared as follows:—

1905	1906	1907	1908	1909	1910	1911	1912	1913-14	1914-15.
0.07	5.06	5.86	4.83	4.81	5.40	5.87	6.77	6.19	5.33

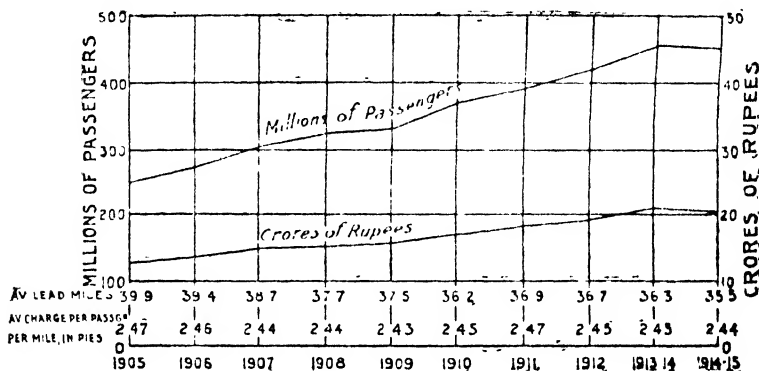
## Percentage of Expenses.

The following diagram shows graphically the ratio of aggregate revenue expenditure to gross receipts of State lines, worked by the State and Companies, for the past ten years:—



## Passenger Earnings.

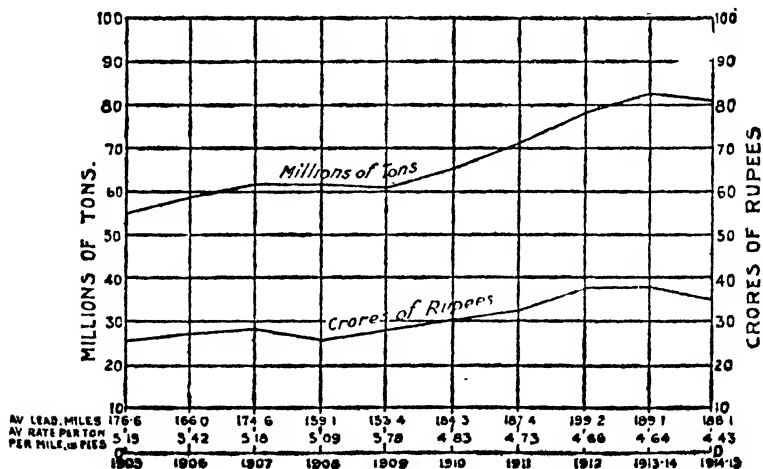
The number of passengers carried and the earnings therefrom are compared in the next diagram :—



The decrease in the passenger traffic during the year under review was chiefly due to the effect of the war upon trade and to the absence of tourists and military officers from the country. But for the opening of new railways and the movement of troops consequent on the war, this decrease would have been still greater.

## Goods Traffic.

A similar comparison of the tonnage of, and earnings from, goods traffic is afforded by the following diagram :—



The large falling off in the earnings from goods traffic, which was not accompanied by a corresponding decrease in the quantity carried, was principally due to the low-rated commodities (coal and grain and pulse) carried and to the war and famine conditions.

**Mileage.**—During the year 1914-15, 645·70 miles of railway were opened to traffic, bringing the total mileage open (after allowing for minor corrections due to realignments, etc.) up to 32,285 miles. The additional mileage was made up as follows :—

	5'-0" gauge.	3'-3½" gauge.	2'-6" gauge.	2'-0" gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State .. .. .	104·18	5·90	..	..	110·08
State lines worked by Companies .. .. .	17·37	102·38	29·78	..	149·53
Branch line Companies' railways under rebate terms, worked by the Branch line Company .. .. .	..	..	1·15	39·50	40·65
Branch line Companies' railways under rebate terms, worked by the main line .. .. .	72·59	..	123·79	..	196·38
Companies' lines subsidized by the Government of India .. .. .	..	..	6·00	..	6·00
District Board lines .. .. .	..	8·58	..	..	8·58
Companies' lines subsidized by District Boards .. .. .	..	..	5·88	..	5·88
Native State lines worked by Native States .. .. .	..	37·39	7·05	12·00	57·34
Native State lines worked by the main line .. .. .	..	14·72	41·82	..	56·54
Companies' lines guaranteed by Native States .. .. .	..	..	14·72	..	14·72
<b>TOTAL ..</b>	<b>194·14</b>	<b>168·97</b>	<b>231·09</b>	<b>51·50</b>	<b>645·70</b>

For the second year in succession the mileage on the 2'-6" gauge opened to traffic during the year exceeds that on any other gauge. For the first time in the history of Indian railways the mileage of railways which have been completed by Companies who have obtained concessions on rebate terms exceeds the mileage of railways which have been financed by any other one method and have been opened during the year. Of the total mileage of 237 financed under these terms 210 miles have been constructed with money raised in India.

**Ten Years' Progress.**—The progress made during the past ten years is summarised in the following table :—

Gauge.	Mileage opened at the end of									
	1905	1906	1907	1908	1909	1910	1911	1912	1913-14	1914-15
5'-6" ..	15,028	15,548	15,821	15,951	16,309	16,701	17,016	17,189	17,641	17,827
3'-3½" ..	11,959	12,149	12,613	12,863	13,323	13,530	13,759	14,165	14,389	14,552
2'-6" ..	980	1,071	1,234	1,394	1,443	1,436	1,632	1,692	2,174	2,402
2'-0" ..	328	329	342	368	415	432	432	438	452	504
<b>Total ..</b>	<b>28,295</b>	<b>29,097</b>	<b>30,010</b>	<b>30,576</b>	<b>31,490</b>	<b>32,099</b>	<b>32,839</b>	<b>33,484</b>	<b>34,656</b>	<b>35,285</b>

**Feeder Railways.**—As noted in the introduction, efforts have been made to secure the participation of private capital in railway construction in India under what are called the branch line terms. In 1910 more liberal terms were offered for this purpose, and private enterprise was offered two alternative forms of assistance :—

(1) A rebate paid by the parent line from its net earnings from traffic brought to it by the feeder railway, sufficient to make up 5 per cent. on the paid up capital of the Branch Line Company; the liability of the main line being, however, limited to the total of the net earnings from this traffic.

(2) A firm guarantee from Government of a 3½ per cent. return on the paid up capital. In

certain cases, when the Branch Line Company so desires, a guarantee may be offered in respect of a portion of the capital of the Company, and a rebate in respect of the remainder.

During the year ending March 1914, Rs. 224 lakhs of capital were raised under the Branch Line terms for the construction of 341 miles of railway; while the lines similarly financed during the year under review aggregated 377 miles and involved a total capital outlay of Rs. 197½ lakhs. Negotiations were, in addition, concluded, and concessions granted for the construction of several other branch lines.

Notwithstanding the effect which the outbreak of war has exercised on the money market, three out of the eight lines included in the

schedule were financed after its outbreak—a fact which testifies to the popularity of Companies floated under the Branch Line terms. Additional evidence of this popularity is furnished by the fact that apart from the schemes for which concessions have actually been granted, there were under negotiation at the close of the year 1914-15 proposals for the construction of 2,376 miles of railway on the 2'-6" gauge, 649 miles on the metro-gauge, and 570 miles on the broad-gauge, or an aggregate of 3,595 miles of railway, involving a total capital outlay of nearly twenty crores of rupees, or upwards of thirteen millions sterling.

But however attractive the Branch Line terms of 1913 may have proved in respect of the better developed provinces of India, it was recognised that in Assam, owing to the undeveloped state of the country, further inducements than those held out by the Branch Line terms were necessary if private capital was to be attracted to railway projects. It was accordingly decided that special terms should be offered for the construction of railways in that province and a Resolution was issued in January 1915 which permitted the grant for a limited number of years after opening of a railway to traffic, of a provincial subsidy of 1 per cent. by the Assam Administration in addition to the Imperial guarantee of 3½ per cent. The number of proposals for the construction of feeder lines in Assam, which have been put forward since the publication of this Resolution, shows that the value of this additional concession is fully appreciated by the public.

**District Boards:**—The part taken by the District Boards of the Madras Presidency in the development of railway communications in the Presidency is well known. Since the year 1884, District Boards in Madras have been empowered to levy a special cess not exceeding 3 ples per rupee of land revenue—the proceeds of this cess being reserved for the construction of feeder railways intended to develop the districts which finance and own them.

The Tanjore and Kistna District Board Railways were for some years the only examples of lines so constructed, but recently the example of those Boards have been followed in several other parts of the Presidency. During the year under review, the following lines were under construction at the cost of local funds:—

- (1) Podanur-Pollachi (3'-3½") by the District Board of Coimbatore, 25 miles in length and estimated to cost Rs. 11½ lakhs.
- (2) Tenali-Repalli Railway (5'-6") by the District Board of Guntur, 23 miles in length and estimated at Rs. 14 lakhs.
- (3) Nidamangalam Mannargudi and Tiruturai-pundi-Vedaram Railway (3'-3½") by the Tanjore District Board, having a combined mileage of 31½ and being estimated to cost approximately Rs. 20 lakhs.

For various reasons, no new District Board Railways were actually sanctioned during the year, but at its close negotiations were in progress in connection with a number of important schemes, which it was hoped would shortly materialise.

To encourage District Board enterprise in other parts of India, permission to legislate for the levy of a railway cess was extended during 1913 to all Local Governments desiring to introduce such legislation, but it will probably be some years before any of the Local Boards in these provinces have accumulated sufficient funds to commence the construction of branch railways.

**Accidents.**—The total number of persons of all classes killed by causes beyond their control was 76 against 117 and the number injured 329 against 270 in the previous year. Out of a total of 451.09 millions against 466.0 millions of passengers travelling, and of 16,022.85 millions of miles against 16,612.58 millions of miles travelled, 16 passengers were killed and 140 injured against 58 killed and 104 injured in the previous year. This gives an average of one fatal casualty in 28.19 millions against one in 8.04 millions of persons travelling and an average of one in 1,001.43 millions against one in 280.142 millions of miles travelled in 1914-15 and 1913-14 respectively. This diminution in the number of fatalities cannot, however, be attributed to any decrease in the number of accidents. In the previous year an unusually large number of persons were killed; two accidents alone causing the death of 56 persons.

The following are particulars of the more serious train accidents:—

A passenger train running through Sambhu station on the North-Western Railway, on the 20th November 1914, was pulled up by the driver in order to obtain permission to proceed to the next station. This "permit" should have been in the pouch which is picked up mechanically by the engine when a train does not stop at a station, but was missing on this occasion. After some delay caused by the Assistant Station Master misdating a second "permit" the train was backed and drawn up about the centre of the station, and while standing on this position was run into from behind by a mail train which was following. Three vehicles were wrecked and 8 persons killed and 25 injured by the collision.

The case was the subject of departmental enquiry as a result of which the accident was attributed to the action of the Assistant Station Master in lowering the signals for the mail train in contravention of the rules and so allowing that train to enter the station before the line on which it was to be received was clear. The Assistant Station Master was subsequently prosecuted, convicted and sentenced to 2 years' imprisonment and a fine of Rs. 200.

A goods train while ascending the gradient passing through a tunnel near Igatpuri station on the Ghat section of the Great Indian Peninsula Railway on the 15th October 1914, parted between the 2nd and 3rd vehicles from the leading engine and the rear portion ran back towards Tnal Ghat Reversing station where it collided with a down goods train standing outside the station, owing to the points leading to No. 3 catch siding, which is provided for such a contingency, being held over by the pointman for the down main line, instead of being allowed to remain in their normal position for the catch

siding. Eight railway servants were killed and twenty-two injured.

Two engines were working the train which was fitted with automatic vacuum brakes. Considerable trouble had been experienced in hauling the train up the gradient owing to the engine in rear slipping and the train had on one occasion come to a stand in a tunnel situated lower down than the one in which it subsequently parted, owing to the vacuum brake connecting hose-pipe between two vehicles coming uncoupled. In restarting the train the staff had neglected to restore this connection and consequently when the train parted in the tunnel further up by the breakage of a drawbar, the rear portion ran backward down the grade and could not be controlled owing to the vacuum brake having been rendered inoperative after the first stoppage.

The staff at fault were dealt with departmentally.

The question as to the best arrangement of the catch siding points so as to obviate a recurrence of the kind is still under investigation.

An up Barabani Pilot collided with a down Barabani Pilot between Ondal and Sonachora stations, on the East Indian Railway, on the 4th April 1914, resulting in the death of three railway servants including the driver who was primarily responsible for the accident, and injuries to eight other railway servants. The rolling-stock was also considerably damaged. The accident was due to the driver of the down Barabani Pilot having started with a wrong line clear. The Assistant Station Master of Sonachora was also responsible for the accident inasmuch as he failed to give proper instructions as to the train for which the line clear was intended, or to ensure that his instructions were fully understood and properly carried out, as required by the rules.

The accident would have been averted, had the Assistant Station Master sent immediate warning to Ondal Junction cabin when he discovered that the down Barabani Pilot had left with a wrong line clear. The staff at fault were departmentally punished.

On the 21st May 1914, two third class carriages of an up mixed train caught fire between Shedbal and Miraj stations, on the Poona Branch of the Madras and Southern Mahratta Railway. The train was brought to a stand and it was found that an Indian woman and a child, who had shut themselves up in the lavatory in the front carriage, had been burnt to death, and that out of the ten passengers who had jumped from the carriages, whilst the train was in motion, five had received slight and five serious injuries. The two carriages were burnt to the underframes and, as the fire was burning too fiercely to be extinguished, the train was divided and the burning vehicles isolated. It is believed that the carriages were set on fire by a lighted cigarette being dropped by one of the passengers into a window slot which was open at the bottom and to the current of air passing upwards between the inner and outer linings of the window and fanning the burning cigarette end into a flame.

To prevent similar accidents in future it has been suggested to Railway Administration

that some form of fire extinguishers be carried in the brake vans of mixed trains and that the bottom of window wells, which are left open in certain carriages in order that articles dropped into the window slot might ordinarily fall on to the floor of the carriage be closed.

The Ceylon Boat Mail collided with a goods special near Samudram station on the South Indian Railway, on the 26th May 1914. An employee of the Railway, who was travelling in the rear brake-van of the goods train, was slightly injured: but the damage to rolling stock especially in the case of the goods train was considerable.

A storm the night before had blown down trees which had damaged the wires connecting the block instruments. This had necessitated the suspension of the ordinary method of working trains on the Absolute Block System and resort to the working of trains under special rules and regulations framed by the Company to meet such a contingency. Neglect by the station staff of certain precautions imposed by these regulations led to the admission into the same block section of the mail and the goods train from opposite directions simultaneously and a further neglect on the part of the driver of the goods train of precautions as to speed resulted in the collision.

In investigating the cause of the accident it was found that the rules and regulations framed by the Company for the working of trains during the failure of telegraphic communication left too much to the discretion of the staff, and it was consequently decided to revise the rules. The staff at fault were dealt with departmentally.

Early on the morning of the 20th November 1914, a "glancing" collision occurred at Korukuppattai, a small station on the Madras and Southern Mahratta Railway, in the outskirts of Madras.

Two goods trains had to cross at this place. The up train arrived first and entered the loop siding. The down train was then received on the platform a line: it was a long train and was brought to a stand before the rear brake-van had been drawn fully clear of the points. The fact of the points being fouled appears to have escaped notice and the up train was permitted to resume its journey towards Madras with the result that the engine collided with the rear of the down train and derailed the last three vehicles on it.

The Assistant Station Master, who was, in a great measure, responsible for the accident, was found dead under one of the wagons. The guard of the down train, who was equally responsible, was prosecuted and sentenced to pay a fine of Rs. 150, or in default, to undergo three months' rigorous imprisonment.

**Railway Staff.**—The total number of servants in railway employ at the close of the year was 800,116, of which number 7,640 were Europeans, 10,345 Anglo-Indians, and 582,181 Indians. Of the Europeans and Anglo-Indians, 15,981 were enrolled as Volunteers. At the close of 1914-15, there were 10,664 children and 10,163 apprentices and workmen attending the Railway Schools.

## THE CHIEF RAILWAYS IN INDIA.

The Assam-Bengal Railway, which is constructed on the metre gauge, starts from Chittagong and runs through Surma Valley across the North Cachar Hills into Assam. It is worked under a limited guarantee by a company whose contract is terminable in 1921. The main line has an open mileage of 847·98. The total capital outlay is Rs. 1,624 lakhs, gross earnings 68 lakhs, net earnings, 17 lakhs and the percentage of net earnings on the capital outlay 1·07. The loss to the State for 1914-15 was Rs. 34,01,928.

### Bengal and North-Western.

The Bengal and North-Western Railway was constructed on the metre gauge system by a company without any Government assistance other than free land and was opened to traffic in 1885. The system was begun in 1874 as the Tirhut State Railway. In 1890 this line was leased by Government to the Bengal and North-Western Railway. Since then extensive additions have been made in both sections. It is connected with the Rajputana metre gauge system at Cawnpore and with the Eastern Bengal State Railway at Khatihar and the Oudh and Rohilkhand Railway at Benares. The open mileage is 2,027·12 under construction or sanction 35·08, total 2,062·20. The total capital outlay amounts to Rs. 991 lakhs, gross earnings 108 lakhs, net earnings Rs. 65 lakhs and interest divided between the Government and Company Rs. 68 lakhs; percentage of total net income on capital outlay 6·95. Tirhut railway: Total capital outlay Rs. 817 lakhs, gross earnings Rs. 95 lakhs, net earnings Rs. 58 lakhs, gain to the State Rs. 26 lakhs, and percentage 6·72.

### Bengal-Nagpur.

The Bengal-Nagpur Railway was commenced as a metre gauge from Nagpur to Chhatishgarh in the Central Provinces in 1887. A company was formed under a guarantee which took over the line, converted it to the broad gauge and extended it to Howrah, Cuttack and Katni. In 1901 a part of the East Coast State Railway from Cuttack to Vizagapatam was transferred to it and in the same year sanction was given for an extension to the coal fields and for a connection with the Branch or the East Indian Railway at Hariharpur. Open mileage 2,727·85; under construction or sanctioned 283·23; total 3,011·08. The total capital outlay is Rs. 4,021 lakhs, gross earnings Rs. 410 lakhs, net earnings 203 lakhs, percentage of net earnings on capital outlay is 5·05. The gain to the State is 47 lakhs.

### Bombay Baroda.

The Bombay, Baroda and Central India Railway is one of the original guaranteed railways. It was commenced from Surat via Baroda to Ahmedabad, but was subsequently extended to Bombay. The original contract was terminable in 1880, but the period was extended to 1905; and then renewed under revised conditions. In 1885 the Rajputana Malwa metre gauge system of State railways was leased to the Company and has since been incorporated in it. On the opening of the Nagda-Muttra, giving broad gauge connec-

tion through Eastern Rajputana with Delhi, the working was entrusted to this Company. On the acquisition of the Company in April 1907 the purchase price was fixed at £11,685,581. The statistical working of the broad gauge shows a mileage of 996·30, the capital outlay 2,441 lakhs, gross earnings 341 lakhs, net earnings 165 lakhs, percentage of net earnings on the capital outlay 6·76; gain to the State 45 lakhs.

The metre gauge system of the Company shows a mileage of 1,815·64; total capital outlay 1,710 lakhs, gross earnings 236 lakhs, net earnings, 132 lakhs; percentage of net earnings on the capital outlay 7·7; gain to the State 75 lakhs.

### Burma Railways.

The Burma Railway is an isolated line, and although various routes have been surveyed there is little prospect of its being connected with the Railway system of India on account of the difficult and sparsely populated country which intervenes. It was commenced as a State Railway and transferred in 1896 to a Company under a guarantee. The mileage is 1,341·85, total capital outlay Rs. 1,772 lakhs, gross earnings 216 lakhs, net earnings 92 lakhs; percentage of net earnings on the capital outlay 5·34, gain to the State 21 lakhs. Burma extensions have a total mileage of 253·18.

### Eastern Bengal.

The Eastern Bengal State Railway was promoted under the original form of guarantee and was constructed on the broad gauge. The first portion of the line running to Calcutta over the Ganges was opened in 1862. In 1874 sanction was granted for the construction on the metre gauge of the Northern Bengal State Railway, which ran from the north bank of the Ganges to the foot of the Himalayas on the way to Darjeeling. These two portions of the line were amalgamated in 1884 into one State Railway. The open mileage is 1639·05, capital total outlay 3,501 lakhs, gross earnings 332 lakhs, net earnings 114 lakhs, percentage of net earnings on capital outlay 3·28. Loss to the State 18 lakhs.

### The East Indian.

The East Indian Railway is one of the three railways sanctioned for construction as experimental lines under the old form of guarantee. The first section from Howrah to Pandua was opened in 1854 and at the time of the Mutiny ran as far as Ranganj. It gives the only direct access to the port of Calcutta from Northern India and is consequently fed by all the large railway systems connected with it. In 1880 the Government purchased the line, paying the shareholders by annuities, but leased it again to the company to work under a contract which is terminable in 1919. The open mileage is 2,716·46 under construction or sanction 89·67, total 2,806·13. Total capital outlay (on 2,445 miles) Rs. 7,052 lakhs, gross earnings 1,035 lakhs, net earnings Rs. 625 lakhs, percentage of net earnings on capital outlay 8·87; gain to the State 236 lakhs.



### Great Indian Peninsula.

The Great Indian Peninsula Railway is the earliest line undertaken in India. It was promoted by a Company under a guarantee of 5 per cent. and the first section from Bombay to Thana was open for traffic in 1853. Sanction was given for the extension of this line *via* Poona to Raichur, where it connects with the Madras Railway, and to Jubbulpore where it meets the East Indian Railway. The feature of the line is the passage of the Western Ghats, these sections being 15½ miles on the Bhore Ghat and 9¼ miles on the Thul Ghat which rise 1,131 and 972 feet. In 1900, the contract with the Government terminated and under an arrangement with the Indian Midland Railway that line was amalgamated and leased to a Company to work. The open mileage is 3,088.66, under construction or sanction 265.90; total 3,354.66. The total capital outlay on the Company's own system of 2,499.64 miles is 6,257 lakhs, gross earnings, 771 lakhs, net earnings 286 lakhs, percentage of net earnings on capital outlay 4.57; gain to the State 8.15 lakhs.

### Madras Railway.

The Madras Railway was the third of the original railways constructed as experimental lines under the old form of guarantee. It was projected to run in a north-westerly direction in connection with the Great Indian Peninsula Railway and in a south-westerly direction to Calcutt. On the expiry of the contract in 1907 the line was amalgamated with the Southern Mahratta Railway Company, a system on the metre gauge built to meet the famine conditions in the Southern Mahratta Country and released to a large Company called the Madras and Southern Mahratta Railway Company. The mileage is 3,131.63, under construction, or sanction 36.96, total 3,168.59. The capital outlay on the Company's own system of 2,551.33 miles is 32.38 lakhs, gross earnings 373 lakhs, net earnings 163 lakhs, percentage of net earnings on capital outlay 5.04, loss to the State 41 lakhs. (The annuity payment is Rs. 73 lakhs.)

### The North-Western.

The North-Western State Railway began its existence at the Smd-Punjab-Delhi Railway, which was promoted by a Company under the original form of guarantee and extended to Delhi, Multan and Lahore and from Karachi to Kotri. The interval between Kotri and Multan was unbridged and the railway traffic was exchanged by a ferry service. In 1871-72 sanction was given for the connection of this by the Indus Valley State Railways and at the same time the Punjab Northern State Railway from Lahore towards Peshawar was begun. In 1886 the Smd-Punjab-Delhi Railway was acquired by the State and amalgamated with these two railways under the name of the North-Western State Railway. It is the longest railway in India under one administration. The opened mileage is 5,329.33, under construction or sanction 158.06, total 5,487.99. The statistical results of the working of the State owned 4,010.48 miles are total outlay Rs. 85.87 lakhs, gross earnings 817 lakhs, net earnings 805 lakhs, percentage of earnings on capital outlay 3.55, loss to the State 31 lakhs.

### Oudh and Rohilkhand.

Oudh and Rohilkhand Railway was another of the lines constructed under the original form of guarantee. It began from the north bank of the Ganges running through Rohilkhand as far as Saharanpur where it joins the North-Western State Railway. It was not until 1887 that the bridge over the Ganges was completed and connected with the East Indian Railway. To effect a connection between the metre gauge systems to the North and those to the South of the Ganges, a third rail was laid between Bhurlwal and Cawnpore. The Company's contract expired in 1889 when the Railway was purchased by the State and has since been worked as a State Railway. The opened mileage is 1,714.04, under construction and sanction 64.55, total 1,778.59. The total capital outlay on the State system of 1,632 miles is 2,215 lakhs, gross earnings 208 lakhs, net earnings 91 lakhs, percentage of net earnings on capital outlay 4.12. Loss to the State was 2 lakhs.

### The South Indian.

The South Indian Railway was one of the original guaranteed railways. It was begun by the Great Southern India Railway Company as a broad gauge line; but was converted after the seventies to the metre gauge. This line has been extended and now serves the whole of the Southern India, south of the south-west line of the Madras Railway. Between Tuticorin and Ceylon a ferry service was formerly maintained, but a new and more direct route to Ceylon *via* Rameshwaram was opened at the beginning of 1914. As the original contract ended in 1907, a new contract was entered upon with the Company on the 1st of January 1908. The open mileage is 1,762.82, under construction or sanction 87.31, total 1,850.13. The statistical results of the working of the Company's system of 1,455.17 miles gives a capital outlay, 1,875 lakhs, gross earnings 272 lakhs, net earnings 115 lakhs, percentage of net earnings to capital outlay of 6.14; gain to the State 56 lakhs.

### The Native States.

The principal Native State Railways are: The Nizam's, constructed by a company under a guarantee from the Hyderabad State; the Kathiawar system of railways, constructed by subscriptions, among the several Chiefs in Kathiawar; the Jodhpur-Bikaner Railway, constructed by the Jodhpur and Bikaner Chiefs; the system of railways in the Punjab constructed by the Patiala, Jind, Maler Kotla, and Kashmir Chiefs; and the railways in Mysore constructed by the Mysore State.

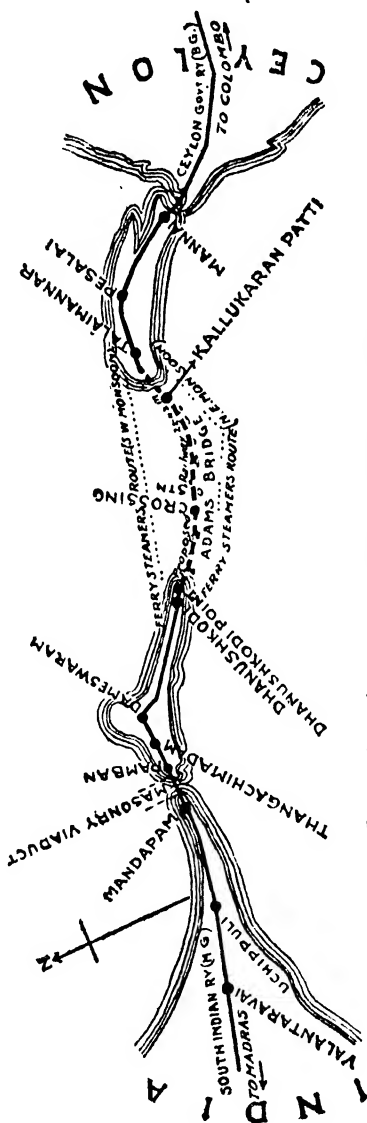
### The Sara Bridge.

The Lower Ganges Bridge at Sara was formally opened to all kinds of traffic on 4th March 1915 and was named the Hardinge Bridge.

The necessity for bridging the Ganges at some point in Lower Bengal arose from the increasing volume of traffic of all descriptions and kinds which has now to be carried in both directions over the Eastern Bengal Railway between Calcutta and Northern Bengal and Assam. Hitherto the traffic has been taken across the Ganges in barges, supplemented, as the traffic increased, by metre and broad gauge wagon ferries. The

PALK BAY

GULF OF MANNAR



PROPOSED RAILWAY FROM INDIA TO CEYLON.

constant changing of the river channels, the instability of the river banks, the sudden rushes of traffic when the main staples (jute, tea, rice, etc.) have had to be moved, and the break of gauge of the Railways on the Northern (metre) and Southern (broad gauge) banks of the Ganges have for years combined to produce conditions with which neither the Railway administration nor its clients were content. The Bridge is an engineering work of greater magnitude than any previously undertaken in the East, and takes its place as one of the most interesting and important engineering works of the world. The bridge consists of 15 spans of 345'-14" girders from centre to centre of bearings with three land spans of 75' each at each end, giving a total length of 5,900 feet, that is to say, approximately 1½ miles. It carries a double line of rails and a footway for pedestrians. The foundations consist of wells sunk from 150 to 160 feet below low water level. This great depth was considered necessary owing to the alluvial nature of the soil in the river bed and its liability to be scoured to a depth of 100 feet. The wells carry masonry piers the tops of which are at high flood level, while on the piers are iron trusses 34½ feet in height, which in turn carry the girders. Each well weighs about 16,000 tons, and the wells and piers and trestles of the entire bridge weigh over 300,000 tons.

A headway of 40 feet above highest-flood level has been provided to permit of the free passage of river craft of all kinds at all seasons. Some 20 million cubic feet of stone have been used in the bridge and training works combined. At highest-flood not less than 2½ million cubic feet of water flow under the bridge per second.

Each span of girders weighs 1,250 tons and there are 30,000 tons of steel-work in the whole bridge. Before the design of the girders was taken in hand a careful inquiry into the maximum weight, which engines and vehicles used on the standard gauge might be expected to attain, was carried out. The result of this inquiry was to show the desirability of enhancing the scale of loading in the case of this bridge.

The existing scale laid down in 1908 as a standard for all India was accordingly increased. For Chord Members the increase amounted to 6.4 per cent, for Web Members to 12 per cent, and for Floor Members to 20 per cent. This is equivalent in respect of the main girders to a train of vehicles weighing 1.6 tons per foot hauled by two 8-wheel coupled locomotives with 20-ton axle loads on each of the coupled wheels, and in respect of the floor system to an 8-wheel coupled locomotive with 23-ton axle loads on each of the coupled wheels. Some 1,700,000 rivets were riveted up at site. For this pneumatic and hydraulic power were employed. In the construction of the masonry of the bridge, cement concrete was freely used, concrete blocks weighing from 6 to 7 tons each being moulded in the blockyards and, after being allowed to set, carried to the works and used in place of bricks. Electricity was employed for the transmission of power over the whole of the work. The cost of the whole work is estimated to amount to some 360 lakhs of rupees, made up of 100 lakhs for the River Training works, 72 lakhs for the approaches and 188 lakhs for the Bridge structure proper.

The construction of the Hardinge Bridge will very largely remove the inconveniences to which the traffic has hitherto been subjected, although transhipment of the greater part of the traffic from metre to broad gauge will still be necessary at one or more points north of the river. This transhipment will now, however, be carried out in permanent tranship yards, the site of which will not depend on the vagaries of the river, while the very great expense of maintaining a ferry service under unusually unfavourable conditions will be avoided, thus bringing about large savings in working expenses. Moreover, the greater rapidity and certainty of transport is expected to result in a very great increase in the volume of traffic on existing lines, while extensions such as the Sara-Seraganj Railway now under construction will bring much new traffic which the Eastern Bengal Railway without the bridge would have been unable to deal with.

## INDIA AND CEYLON

The possibility of connecting India and Ceylon by a railway across the bank of sand extending the whole way from Rameswaram to Mannar has been reported on from time to time, since 1895 various schemes having been suggested.

The South Indian Railway having been extended to Dhanushkodi, the southernmost point of Rameswaram Island, and the Ceylon Government Railway to Talaimannar, on Mannar Island, two points distant from each other about 21 miles across a narrow and shallow strait, the project has again been investigated with the idea of connecting these two terminal stations by a railway constructed on a solid embankment raised on the sand bank known as "Adam's Bridge", to supersede the ferry steamer service which has been established between these two points.

In 1913, a detailed survey was made by the South Indian Railway Company, and a project has now been prepared. This project contemplates the construction of a causeway from

Dhanushkodi Point on the Indian side to Talaimannar Point on the Ceylon side, a length of 20.05 miles of which 7.19 will be upon the dry land of the various lands, and 12.86 will be in water. The sections on dry land will consist of low banks of sand pitched with coral and present no difficulty. The section through the sea will be carried on a causeway which it is proposed to construct in the following way. A double row of reinforced concrete piles, pitched at 10 feet centres and having their inner faces 14 feet apart, will first be driven into the sand. These piles will then be braced together longitudinally with light concrete arches and chains and transversely with concrete ties, struts and chains. Behind the piles slabs of reinforced concrete will be slipped into position, the bottom slabs being sunk well into the sand of the sea bottom. Lastly, the space enclosed by the slabs will be filled in with sand.

The top of the concrete work will be carried to six feet above high water level, and the rails

will be laid at that level. The sinking of the piles and slabs will be done by means of water jacks. This causeway, it is expected, will cause the suspended sand brought up by the currents, to settle on either side bringing about rapid accretion and eventually making one big island of Rameswaram island and Mannar island.

If this method of construction is adopted, it is estimated that the total cost of the causeway and works at the two terminal points, viz.—Dhanushkodi and Talaimannar will be approximately 111 lakhs.

### Indo-Burma Connection.

The raids of the Emden in the Bay of Bengal in 1914, and the temporary interruption of communications between India and Burma, stimulated the demand for a direct railway connection between India and Burma. Government accepted the position and appointed Mr. Richards, M. Inst. C.E., to be the engineer-in-charge of the surveys to determine the best route for a railway from India to Burma. The coast route appears to be the favoured one. This would start from Chittagong, which is the terminus and head-quarters of the Assam-Bengal Railway and a seaport for the produce of Assam. The route runs southwards through the Chittagong district, a land of fertile rice fields intersected by big rivers and tidal creeks and it crosses the Indo-Burma frontier, 94 miles from the town of Chittagong. For about 160 miles further it chiefly runs through the fertile rice lands of Arrakan and crosses all the big tidal rivers of the Akyab delta. These include the Kaladan river which drains 4,700 miles of country and even at a distance of about 30 miles from its mouth is more than half a mile wide. About 200 miles from Chittagong the railway would run into the region of mangrove swamps which fringe the seacoast north and south of the harbour of Kawkphu stretching out into the mangrove swamps like ribs from the backbone. Innumerable spurs of the

Arrakan Yoma have to be crossed. Yoma is a mountain ridge which extends from Cape Negrais northwards until it loses itself in a mass of tangled hills east of Akyab and Chittagong. At its southern end the height of the ridge is insignificant but it has peaks as high as 4,000 feet before it reaches the altitude of Sandway and further north it rises much higher. It is a formidable obstacle to railway communication between India and Burma. This route is estimated to cost about £7,000,000 and would have to be supplemented by branch lines to Akyab where there is at present a considerable rice traffic and the cost of this would have to be added to the £7,000,000 already referred to.

The other routes examined have been the Hukong Valley route and the Manipur route which were surveyed by the late Mr. R. A. Way many years ago. The Manipur route is estimated to cost about £5,000,000 as it has to cross three main ranges of hills with summit levels of 2,050, 3,000 and 8,900 feet long. Altogether there would be about four miles of tunnelling through the three main ridges and through other hills and more than 100 miles of expensive undulating railway with grades as steep as 1 in 50 and 11,000 feet of aggregate rise and fall. The Hukong valley route seems to be the cheapest one as it is estimated to cost £3,500,000. This line is only about 284 miles long and it presents fewer engineering difficulties than either the Coast or the Manipur route. One hundred and fifty miles of this route lie in open country capable of cultivation though at present it is only very thinly populated. Only one range of hills has to be crossed and this can be negotiated with a summit tunnel of 5,000 feet long at a height of 2,500 feet. There are less than fifty miles of very heavy work and only about 4,500 ft. aggregate of rise and fall.

Later in the year, when severe economies had to be practised, and it was clear that funds would not be available for the purposes of the railway, the survey parties were withdrawn.

Main results of working of all Indian Railways treated as one system.

	Particulars.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.
1	Mileage open at close of the calendar year .. .. Miles	29,957	30,576	31,490	32,099	32,839	33,484	34,652	35,285
2	Total Capital outlay, including ferries and suspense, on open lines (in thousands of rupees) .. Rs.	3,91,86.93	4,11,91.71	4,29,83.20	4,39,04.73	4,50,06.80	4,65,15.00	4,95,08.64	5,19,22.13
3	Gross earnings (in thousands of rupees) .. .. "	47,36.51	44,82.69	47,06.38	51,14.22	55,27.92	61,65.07	63,58.56	60,42.01
4	Gross earnings per mile open .. .. "	15,794	14,663	14,948	15,936	16,833	18,412	18,350	17,123
5	Gross earnings per mile open per week .. .. "	304	292	287	306	324	354	353	329
6	Gross earnings per train-mile .. .. "	3.79	3.51	3.67	3.85	3.87	4.04	4.07	3.84
7	Total working expenses (in thousands of rupees) .. .. "	24,32.21	27,00.25	26,38.48	27,15.72	28,33.92	30,15.92	32,93.04	32,74.10
8	Working expenses per mile open .. .. "	8,121	8,883	8,380	8,462	8,782	9,007	9,504	9,279
9	Working expenses per train-mile .. .. "	1.95	2.11	.06	2.04	2.02	1.98	2.11	2.08
10	Percentage of working expenses to gross earnings .. .. Per cent	51.42	60.24	.06	53.10	52.17	48.92	51.79	54.19
11	Net earnings (in thousands of rupees) .. .. Rs.	22,98.20	17,82.44	20,67.90	23,98.50	26,44.00	31,49.15	30,65.52	27,67.91
12	Net earnings per mile open .. .. "	7,673	5,830	6,568	7,474	8,051	9,405	8,846	7,844
13	Net earnings per train-mile .. .. "	1.84	1.40	1.61	1.81	1.85	2.06	1.96	1.76
14	Percentage of net earnings on total capital outlay (Item 2) .. Per cent.	5.86	4.33	4.81	5.46	5.87	6.77	6.19	5.33
15	Coaching train-miles (in thousands) .. .. Train-miles	43,258	47,885	48,191	48,598	50,833	52,093	55,972	58,569

Main results of working of all Indian Railways treated as one system.

	Particulars.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.
16	Goods train-miles (in thousands) Train-Miles	46,869	44,875	44,065	47,690	53,219	59,992	57,933	56,359
17	Mixed train-miles (in thousands).. "	30,142	29,944	30,859	31,986	33,746	34,940	34,581	35,514
18	Total, including miscellaneous train-miles (in thousands) .. "	124,786	127,831	128,260	132,323	142,944	152,761	156,276	157,142
19	Unit-mileage of passengers (in thousands) .. "	11,840,649	12,102,929	12,364,579	13,432,477	14,372,943	15,318,872	16,614,088	16,022,849
20	Freight ton-mileage of goods (in thousands) .. "	10,840,885	9,925,830	9,340,441	12,092,916	13,328,264	15,628,595	15,623,235	15,225,957
21	Average miles a ton of goods was carried .. "	174.58	159.07	153.37	184.33	187.44	190.15	182.11	188.04
22	Average rate charged for carrying a ton of goods one mile .. Pies	5.18	5.09	5.75	4.83	4.73	4.66	4.64	4.43
	<i>Average miles a passenger was carried.</i>								
23	1st class .. "	100.89	100.76	103.35	99.72	111.60	108.54	112.46	123.88
24	2nd class .. "	70.91	71.26	69.24	75.07	76.33	74.77	74.53	80.04
25	Intermediate class .. "	59.29	58.82	54.89	52.41	57.27	51.90	51.13	49.72
26	3rd class .. "	39.65	38.65	38.74	37.12	37.72	37.81	37.40	36.59
27	Season and Vendors' tickets .. "	9.31	8.94	8.89	8.79	8.78	8.71	8.71	8.50
28	Total .. "	38.71	37.68	37.54	36.15	36.87	36.72	36.30	35.52
	<i>Average rate charged per passenger per mile.</i>								
29	1st class .. "	13.06	12.95	12.89	14.55	14.29	14.25	14.48	12.79
30	2nd class .. "	5.76	5.76	5.94	6.67	6.73	6.64	6.60	6.23
31	Intermediate class .. "	3.05	3.04	3.06	3.15	3.10	3.12	3.14	3.16
32	3rd class .. "	2.28	2.28	2.28	2.28	2.30	2.30	2.29	2.23
33	Season and Vendors' tickets .. "	1.40	1.39	1.42	1.42	1.43	1.45	1.42	1.42
34	Total .. "	2.44	2.44	2.43	2.45	2.47	2.45	2.45	2.44

Mileage of Railway Lines in India open for Traffic at end of year.

Railways.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.
<b>STATE LINES.</b>										
Agra Delhi Chord*	120	126	126	126	126	126	126	126	126	126
Assam-Bengal*	775	775	775	775	771	790	790	805	812	848
Bacan-Kotah*	..	..	..	14	..	40	40	40	40	40
Bengal Central..	..	..	..	..	..	..	..	..	..	..
Bengal-Nagpur*	1,690	1,695	1,734	1,774	1,791	1,808	1,852	1,852	1,877	1,877
Berwada Extension*	..	..	..	..	..	..	..	..	..	..
Bhopal-Itarsi*	21	21	21	21	21	21	21	21	21	21
Bombay, Baroda & Central India*	13	13	13	13	13	13	12	12	12	12
Brosch-Jambusar*	504	504	504	504	504	504	504	2,762	2,812	2,812
Burus*..	1,340	1,340	1,475	1,527	1,527	1,527	1,527	1,529	1,529	1,529
Cawnpore-Panda*	..	..	..	..	..	..	..	..	..	..
Cawnpore-Burhal	..	..	..	..	..	..	..	..	..	..
Dibone-Kurnool*	..	..	..	..	..	..	..	..	..	..
East Indian*	1,972	2,165	2,208	2,213	2,212	2,213	2,286	2,331	2,424	2,446
Eastern Bengal	1,235	1,272	1,274	1,274	1,503	1,508	1,510	1,570	1,581	1,639
Gondia-Chanda*	..	..	..	..	..	..	..	..	..	..
Great Indian Peninsula*	1,562	1,562	1,562	1,48	153	183	181	181	216	216
Indian Midland*	808	810	810	813	1,599	1,606	2,420	2,419	2,484	2,500
Jabal-Hisar*	..	..	..	..	..	..	..	..	..	..
Kodhupur-Hyderabad*	124	124	124	124	124	124	124	124	124	124
Koriat Provincial State	..	..	..	..	..	..	..	..	..	..
Subbulpore-Gondia*	30	32	32	32	32	30	32	32	32	32
Kalka-Simla	229	245	250	250	275	275	275	276	311	312
Kohat-Tilal	59	59	59	59	60	60	60	60	60	60
Lachnow-Bareilly*	92	92	92	62	62	62	62	62	62	62
Madras and Southern Mahratta*	237	237	237	237	237	237	258	296	298	313
Morapur-Diamrapur*	2,639	2,644	2,647	2,543	2,546	2,553	2,553	2,553	2,553	2,552
Mysore*	..	..	..	..	..	..	..	..	..	..
Patna-Matira*	296	296	296	296	296	19	19	19	74	74
Nagpur Chhindwara*	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..

\* Worked by a Company.

† Amalgamated with Eastern Bengal Railway.

‡ Now worked by Great Indian Peninsula Railway.

§ These are the latest figures published in 1915.

‡ Mileage of Railway Lines in India open for Traffic at end of year—contd.

Railways.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.
<b>STATE LINES.</b>										
Milgrī*	17	17	17	29	29	29	29	29	29	29
North-Western ..	3,275	3,378	3,430	3,463	3,568	3,570	3,656	3,650	3,710	8,650
Koynah-Durval ..	40	40	40	40	40	40	40	40	40	40
Cochin and Kollikhand ..	1,165	1,213	1,228	1,223	1,231	1,327	1,434	1,524	1,525	1,520
Palampur-Dessa*	17	17	17	17	17	17	17	17	17	17
Pardulla-Ranchi*	..	..	72	72	73	73	73	73	115	115
Rajpur-Diamtari*	..	..	57	57	57	57	57	57	57	57
Rajputana-Malwa*	1,782	1,774	1,778	1,778	1,778	1,778	1,778	1,778	1,778	1,778
South Indian*	1,123	1,186	1,207	1,323	1,323	1,323	1,323	1,323	1,323	1,327
Southern Shan States ..	..	..	..	..	..	..	..	..	23	70
Tamilvelly-Quilon*	50	50	50	50	50	50	50	50	50	50
Tirhoot*	565	614	764	775	775	776	769	792	788	788
Tripattin-Krishnagiri*	25	25	25	25	25	25	25	25	25	25
Trems Indus (Kala agh-Bannu) *	..	..	..	..	..	..	..	..	89	89
<b>ASSISTED COMPANIES</b>										
Ahmedabad-Dholka ..	33	33	33	33	33	32	33	33	34	34
Ahmedabad-Parantij ..	55	55	55	55	55	55	55	55	55	55
Amritsar-Patti ..	28	28	28	28	28	54	54	54	54	54
Arrah-Sasaram Light ..	..	..	..	..	..	..	61	61	60	65
Bakhtiarpur-Bihar Light ..	18	18	18	18	28	28	33	33	33	33
Barrack-Basrhat Light ..	26	26	26	26	35	51	51	51	51	52
Barid Light ..	28	75	79	79	79	79	116	116	116	116
Bengal and North Western ..	901	932	1,015	1,017	1,092	1,117	1,176	1,177	1,240	1,239
Bengal Dooars ..	153	153	153	153	153	153	153	153	153	153
Bewarwa-Masulipatam ..	..	..	..	49	52	52	52	52	52	52
Borringret Kolar ..	..	..	..	..	..	..	..	..	11	(b)
Champaner-Shivrajpur Light ..	..	..	..	..	..	..	20	20	20	26
Darjeeling-Himalayan ..	51	51	51	51	51	51	51	51	51	51
el' Umballa-Kalka ..	162	162	162	162	162	192	192	192	192	192
Total ..	..	..	..	..	..	..	..	..	..	..

\* Worked by a Company.

§ These are the latest figures published in 1915.

|| Amalgamated with Bombay, Baroda and Central India Railway.

(b) Shown under Native State lines against Kolar District Railway



† Mileage of Railway Lines in India open for Traffic at end of year.

Railways.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.
ASSISTED COMPANIES.										
Dewari-Rohas Light	..	..	..	..	..	..	..	..	..	24
Deoghar	..	..	..	..	..	..	..	..	..	†
Dhond-Baramati*	..	..	..	..	..	..	..	..	..	27
Dibru-Sadiya	..	..	..	..	..	..	..	..	..	86
Elkempur-Yetmal*	..	..	..	..	..	..	..	..	..	86
Godhra-Lansvada	..	..	..	..	..	..	..	..	..	67
Hardwar-Dehra	..	..	..	..	..	..	..	..	..	24
Howrah-Amra	..	..	..	..	..	..	..	..	..	32
Howrah-Sheakhala	..	..	..	..	..	..	..	..	..	32
Jacobabad-Kashmar*	..	..	..	..	..	..	..	..	..	44
Jessore-Jhenidah	..	..	..	..	..	..	..	..	..	44
Jullundur-Doab	..	..	..	..	..	..	..	..	..	20
Jullundur-Mukerian*	..	..	..	..	..	..	..	..	..	20
Matheran	..	..	..	..	..	..	..	..	..	77
Mirpur Khas-Jhudo	..	..	..	..	..	..	..	..	..	37
Mirpur Khas-Khadro	..	..	..	..	..	..	..	..	..	133
Mymensingh-Jamulpur-Jagannathganj	..	..	..	..	..	..	..	..	..	45
Nadiad-Kapadvanj	..	..	..	..	..	..	..	..	..	13
Powayan Light	..	..	..	..	..	..	..	..	..	13
Rohilkhand and Kumaon	..	..	..	..	..	..	..	..	..	50
Shabdara (Delhi) Saharanpur Light	..	..	..	..	..	..	..	..	..	50
South Behar	..	..	..	..	..	..	..	..	..	55
Southern Punjab	..	..	..	..	..	..	..	..	..	55
Sutlej Valley	..	..	..	..	..	..	..	..	..	28
Tanjore District Board*	..	..	..	..	..	..	..	..	..	40
Tapi Valley	..	..	..	..	..	..	..	..	..	40
Tarapur	..	..	..	..	..	..	..	..	..	256
Tarapur-Balipara	..	..	..	..	..	..	..	..	..	93
Thakom-Duyinzalk Light	..	..	..	..	..	..	..	..	..	93
Total	..	..	..	..	..	..	..	..	..	93

\* Worked by a Company.

† Amalgamated with East Indian Railway.

† These are the latest figures published in 1915.  
(c) Incorporated with the East Indian Railway on the 1st January 1915.

† Mileage of Railway Lines in India open for Traffic at end of year—contd.

Railways.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1903-14.	1914-15.
<b>UNASSISTED COMPANIES.</b>										
Bengal Provincial .. .. .	33	33	33	33	33	33	33	33	33	33
Dehri-Rohitas Light .. .. .	..	..	..	..	..	..	24	24	24	(a) 3
Jodhpur Light .. .. .	..	..	..	..	..	..	3	3	3	3
Lado and Tikak Margherita Colliery .. .. .	9	9	9	9	6	6	6	6	6	6
Madaya Light .. .. .	..	..	..	..	..	..	..	8	8	8
Total	42	42	42	42	39	39	66	74	74	50
<b>NATIVE STATE LINES.</b>										
Bangalore-Chik Ballapur Light .. .. .	..	..	..	..	..	..	..	..	..	15
Bhavnagar-Gondal-Junagad-Portbandar .. .. .	334	334	334	338	338	374	158†	173	206	206
Bhavnagar .. .. .	..	..	..	..	..	..	44	44	45	45
Bhopal-Itarsi .. .. .	44	44	44	44	44	44	113	113	113	113
Bhopal-Ujjain .. .. .	113	113	113	113	113	113	..	..	470	470
Bikaner .. .. .	..	..	..	..	..	..	..	..	..	26
Bilimora-Kalamba .. .. .	..	..	..	..	..	..	..	..	..	146
Bins-Goono-Baran .. .. .	146	146	146	146	146	146	146	146	146	146
Birur-Shimoga .. .. .	38	38	38	38	38	38	38	38	38	38
Cooch-Behar .. .. .	33	34	34	34	34	34	33	33	33	33
Cutch .. .. .	12	12	12	26	36	37	37	37	37	37
Dholpur-Bar .. .. .	..	..	..	..	20	20	20	20	28	37
Dhrangadra .. .. .	..	..	..	..	21	21	21	21	21	21
Gaekwar's Dabhol .. .. .	94	94	94	94	94	94	94	118	142	142
Gaekwar's Mehsana .. .. .	93	93	93	130	138	138	138	138	138	153
Gondal-Portbandar .. .. .	..	..	..	..	..	..	148†	148	148	148
Gwalior Light .. .. .	184	184	184	203	250	250	250	250	250	250
Hindupur .. .. .	51	51	51	51	51	51	51	51	51	51
Itanagoli Branch .. .. .	..	..	..	..	..	..	..	..	..	50
Hyderabad-Godavari Valley .. .. .	391	391	391	391	391	391	391	391	391	391
Jalpur .. .. .	32	32	73	73	73	73	73	73	73	73
Jammu and Kashmir .. .. .	16	16	16	16	16	16	16	16	16	16
Jamunagar .. .. .	54	54	54	54	54	54	54	54	54	54
Jetalpur-Rajkot .. .. .	46	46	46	46	46	46	46	46	46	46
Jodhpur-Bikaner .. .. .	709	709	709	709	776	831	910	996	(b) 587	604

† These are the latest 4 figures published in 1915.

\* Worked by a Company.

(a) Shown under Assisted Companies.

(b) Jodhpur only—figures of Bikaner have been shown separately.

† Mileage of Railway Lines in India open for Traffic at end of year—concluded.

Railways.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.
<b>NATIVE STATE LINES.—contd.</b>										
Junagad	..	..	..	..	..	..	89†	101	114	114
Kanpur-Chachran*	..	..	..	..	..	..	22	22	22	22
Kanjada-Dhari*	..	..	..	..	..	..	..	..	26	26
Kolar District	..	..	..	..	..	..	..	..	..	11
Kolar Gold Fields*	..	10	10	10	10	10	10	10	10	10
Kolhapur*	29	29	29	29	29	29	29	29	29	29
Kosamba-Zaunhwa	..	..	..	..	..	..	..	..	..	26
Ludhiana-Dhuri-Jakhul	79	79	79	79	79	79	79	79	79	79
Morvi	94	94	94	94	94	94	94	94	94	94
Mourbhanj*	32	32	32	32	32	32	32	32	32	32
Mysore-Nanjangud*	16	16	16	16	16	16	16	16	16	16
Nagda-Ujjain*	34	34	34	34	34	34	34	34	34	34
Nizam's	230	230	230	230	230	230	230	230	230	230
Parlakmedil Light*	25	25	25	25	25	25	25	25	25	25
Petlad-Cambay*	32	34	34	34	34	34	34	34	34	34
Petlad-Vasoi	..	..	..	..	..	..	..	..	..	..
Pipar Bilara Light	..	..	..	..	..	..	19	19	25	25
Rajpals*	37	37	37	37	37	37	37	37	37	37
Rajpura-Bhatinda	107	107	107	107	107	107	107	107	107	107
Sangli*	..	..	..	..	..	..	5	5	5	5
Shoranur-Cochin*	65	65	65	65	65	65	65	65	65	65
Tarikere-Narasimharajapur	..	..	..	..	..	..	..	..	..	..
Tinnevely-Quilon*	58	58	58	58	58	58	58	58	58	58
Udaipur-Chitorgarh	67	67	67	67	67	67	67	67	67	67
Vijapur-Kalot-Kadi*	42	42	42	42	42	42	42	42	42	42
Total	3,468	3,471	3,517	3,630	3,742	3,832	3,974	4,198	4,364	4,504
<b>FOREIGN LINES.</b>										
Karalkul-Peralam*	15	15	15	15	15	15	15	15	15	15
Pondicherry*	8	8	8	8	8	8	8	8	8	8
West of India Portuguese*	51	51	51	51	51	51	51	51	51	51
Total	74	74	74	74	74	74	74	74	74	74
Grand Total	28,295	29,097	30,010	30,576	31,490	32,099	32,839	33,484	34,050	35,285

\* Worked by a Company.

† Formerly worked as part of the Bhavnagar-Gondal-Junagad-Forbandar Railway.

## Irrigation.

In the West irrigation is a rare luxury, designed where it exists to increase the productivity of a soil sure of a certain crop under a copious and well distributed rainfall. In great parts of the East, and especially in India, it is a necessity to existence. For in India there are large tracts, such as the deserts of Sind and the South-West Punjab, which are practically rainless; there are others, such as the Deccan plateau, where cultivation is exceedingly precarious, owing to the irregularity of the rainfall and the long intervals when the crops may be exposed to a blazing sun and a desiccating wind; there are some crops, like rice and sugar-cane, which, except in a few highly favoured districts, can only be matured by the aid of irrigation. There are great areas where a single crop, which is called the *kharif*, or rain crop, can in normal years be raised by the unassisted rainfall, but where the second crop, the *rabi* or cold weather crop, is largely dependent on irrigation. Inasmuch as in India sixty-five per cent. of the population is still dependent upon agriculture for the means of livelihood, this brief summary indicates the enormous importance of irrigation to the community.

### Its Early History.

It is natural, in such conditions, that irrigation in India should have been practised from time immemorial. In the history and imagery of the East, there is no figure more familiar than the well, with primitive means for raising the water, followed to-day much as they were in Bible days. In the early records of the peoples of India, dating back to many years before the Christian era, there are frequent references to the practice of irrigation. Wells have been in use from time immemorial; most of the innumerable tanks in Southern India have been in use for many generations; the practice of drawing off the flood waters of the Indus and its tributaries by means of small inundation canals has been followed from a very early date; and in the submontane districts of Northern India are still to be found the remains of ancient irrigation channels, which have been buried for centuries in the undergrowth of the forests. But in the direction of constructing large and scientific works for the utilisation of the surplus waters of the great river little was done before the advent of British rule, and they are comparatively of recent date.

### The State Intervenes.

Irrigation works in India may be divided into three main heads—wells, tanks and canals. The greatest and the most impressive are the canals, and these may arrest attention first, because they constitute one of the most enduring monuments to British rule. They have in British India been constructed by direct State agency. In the early days of modern irrigation, certain works in the Madras Presidency were carried out by a guaranteed company, and the Orissa canal project was commenced through the same agency. Both Companies fell into difficulties, and the system into disfavour; during the Viceroyalty of Lord Lawrence it was decided that all irrigation works which promised a reasonable return on the capital expenditure

should be constructed through direct agency, and should be constructed by the State from loan funds as productive public works.

### The British Inheritance.

The British Government in India inherited a few major irrigation works. One of these was the Grand Anicut—the local term for barrage—stretching across the width of the Cauvery River in Madras. In the Punjab there were a few canals, chiefly inundation—that is above the normal bed of the river and fed from the flood current—constructed by the Muhammedan and Sikh rulers, and owing to its proximity to Delhi, the waters of the Jumna were brought to the neighbourhood of the city by the Mughals. It is doubtful if these works ever irrigated any considerable areas or conferred much benefit on the people, but they suggested the model on which the British engineers worked. In Southern India, Sir Arthur Cotton constructed the upper Anicut across the Coleroon River, so as to secure the full level required for the utilisation of the Grand Anicut across the Cauvery. He also designed the works which, constructed and improved at an outlay of three crores, irrigate more than two million acres in the Godavari and Krishna deltas. In Northern India Sir Probyn Cauley constructed the great Ganges Canal, which takes off from the river near Hardwar, and which in magnitude and boldness of design has not been surpassed by any irrigation work in India or elsewhere. In this way were laid the foundations of the irrigation system in India. The work was gradually pushed forward. In Northern India a great system of canals was constructed, chiefly in the Punjab and the United Provinces. Some of these, like the great Chenab Canal, ought to be classed amongst the wonders of the world. It irrigates nearly two million acres, or about two-fifths of the cultivable area in Egypt, with an ordinary discharge of eleven thousand cubic feet per second, or about six times that of the Thames at Teddington. The Chenab and the Jhelum Canals brought under irrigation great areas of Government waste, and thereby allowed the system of State colonisation, which relieved the congestion on the older villages of the Punjab, and established colonies of over one million of people on what had been the desolate abode of a handful of nomads. In the Bombay Deccan a few protective works were constructed, like Lake Fife and Lake Whiting, drawing their supplies from the Ghats and spilling them over the arid tracts of the Deccan. In Madras there was completed the boldest and most imaginative irrigation work in the world; by the device of constructing a reservoir at Periyar, on the outer slopes of the ghats, and carrying the water by means of a tunnel through the intervening hill, the Madras Government turned the river back on its watershed and poured its waters over fertile lands starved by want of moisture. But these Deccan works did not pay. The cultivators would not use the water in years of good rainfall, and there was not enough to go far in seasons of drought; the inevitable result of such conditions was to concentrate attention upon the remunerative works on the rivers of the Punjab, and to leave protective irrigation to wilt for want of funds.

### The Irrigation Commission.

In order to substitute policy for spasmodic effort, the Irrigation Commission was appointed by Lord Curzon's Government in 1901. It made a detailed survey of the conditions of the country, and produced the report which is the foundation of Indian Irrigation policy to-day. The figures compiled by the Commission illustrate the progress which had been made up to that period. They showed that out of an area of 226 million acres annually under crop in the irrigating provinces of British India, in round numbers 44 millions acres, or 19½ per cent. were ordinarily irrigated. Of the total area irrigated 18½ million acres or 42 per cent. was watered by State works (canals and tanks), and 25½ million acres, or 58 per cent. from private works, of

which rather more than one half was from wells. During the previous quarter of a century area irrigated by Government works had been increased by 8 million acres, or by eighty per cent. and the Commission estimated that during the same period the area under private irrigation had increased by at least three million acres or a total addition to the irrigated area in British India of 11 million acres or 33 per cent. Including the Native States the area under irrigation annually within the British Empire was placed at 53 million acres (19 million from canals, 8 million from wells, 10 million from tanks, and 8 million from other sources). The financial results for works of all classes are shown in the following table:—

Class of Work.	Capital Outlay to end of 1900-01. Lakhs of Rupees.	Interest charges at 4 per cent. on Capital Outlay. Lakhs of Rupees.	Net Revenue in 1900-01. Lakhs of Rupees.	Net Revenue less charge for Interest Lakhs of Rupees.
Major Works	36.63 '72	146 '55	259 '70	113 '15
Minor Works for which capital accounts have been kept.	320 '04	12 '80	19 '18	6 '38
Other Minor Works	....	....	87 '87	87 '87
Total	39,83 '76	159 '35	366 '75	207 '40

In round numbers the State Irrigation works then yielded a net revenue after meeting charges, including interest, of about two crores of rupees and irrigated annually over nine million acres.

### The Commission's Programme.

The Commission reported that the field for the construction of new works of any magnitude on which the net revenue would exceed the interest charges was limited, being restricted to the Punjab, Sind and parts of Madras—tracts for the most part not liable to famine. They recommended that works of this class should be constructed as fast as possible, not only because they would be profitable investments, but also because they would increase the food supply of the country. Then addressing themselves to the question of famine protection, they worked out a very interesting equation. Taking the district of Sholapur, in the Bombay Deccan, perhaps the most famine susceptible district in India, they calculated that the cost of famine relief in it was 5 lakhs of rupees a year. From this deduction, and making allowance for the advantage of famine avoidance as compared with famine relief, they said that the State was justified in protecting the land in such a district at a cost of 221 rupees per acre. For the general protection of the Bombay Deccan they recommended canals fed from storage lakes in the Ghats, where the rainfall has never been known to fall even in the driest years. For Madras they recommended the investigation of the old Tungabhadra project, and of a scheme for storage work on the Kistna. They proposed that Government should undertake the construction of protective works for the rice-growing districts of the Central Provinces and the Ken Canal project in Bundelkhand. The Commission further sketched out a rough programme of new major works to be constructed in different

parts of India, which would cost not less than 44 crores of rupees and would result in an increase of 6,500,000 acres to the irrigated area. They estimated that the construction of these works would impose a permanent yearly burden of nearly 74 lakhs on the State, through the excess of interest charges on capital cost over the net revenue produced from the works. Against this would have to be set the reduction in the cost of future famines resulting from the construction of the works, which the Commission put at 31 lakhs per annum. The balance of 43 lakhs would represent the net annual cost of the works to the State, or the price to be paid for the protection from famine which the works would afford, and for all other indirect advantages which might be attributed to them.

### The New Policy.

The principal effect of the Irrigation Commission's report was to substitute policy for spasmodic effort, and the progress since made has been remarkable. The action taken on the recommendation of the Commission is thus summarised by the Government of India in a recent review:—

**Punjab Triple Project.**—In the year 1901 a project was submitted to the Government of India for the irrigation of the lower Ravi by means of a canal taking out of the Sutlej river. It was suggested to the Irrigation Commission that it would be more advantageous to carry out this work as an adjunct to a more comprehensive scheme for the irrigation of the Jech and Bechna and lower Bari Doab. This scheme relied on the possibility of utilizing

the ample surplus waters of the Jhelum river to serve these vast areas, thus leaving the Sotlej and Beas waters free for utilization in the Sotlej valley. Subsequent investigations showed that this idea was feasible and the project consisting of three distinct systems, the Upper Jhelum, the Upper Chenab, and the Lower Bari Doab canals was sanctioned in 1904. It has now been practically completed, and the Upper Jhelum Canal was opened by Lord Hardinge in December 1915. To secure the full benefits of this great work it is anticipated that the storage of the Woolar Lake in Kashmir will have to be increased. The total estimated cost of the combined system is 10½ crores of rupees.

**Sind Sagar Canal.**—The Irrigation Commission expressed a hope that it would be possible in the future to undertake the construction of a canal drawing its waters from the Indus for the irrigation of the wide expanse of desert in the Mianwali and Muzaffargarh districts known as the Sind Sagar doab. The investigation of the project has been deferred until other far more promising schemes are advanced.

**Woolar Lake Storage.**—It was suggested to the Commission that the Woolar lake in Kashmir should be converted into a storage reservoir for the purpose of augmenting the water supply of the Triple project. This proposal was however dropped in 1905, because the Government of India were advised that the areas to be served by the Triple Canal system would not require more water than was already available in the rivers from which the canals derived their supplies. It has since been found however, that the dredging operations, by lowering the bed of the lake, have diminished the flow of the Jhelum river at certain periods. It will consequently become necessary to construct a dam across the Jhelum in order to give an adequate supply of water to the several systems dependent on the cold weather supply of the river and the Government of India have recently ordered the preparation of a project for this purpose.

**Sotlej Valley Project.**—The Commission drew attention to the possibility of increasing irrigation in the Sotlej valley by the construction of weirs on the river so as to give a more assured and regular supply of water in all seasons to the existing British inundation canals in that tract. Subsequent investigations have shown that a more extended system of irrigation is possible by which the Native States of Bahawalpur and Bikanir would also benefit. A preliminary project is now under investigation.

**Sind.**—The question of converting the network of inundation canals in Sind into perennial channels by means of weirs across the river Indus has been considered at various intervals during the past 50 years. As a result of the investigations that were made a scheme was drawn up for the construction, at a cost of some 7½ crores, of a barrage at Sukkur with a canal on the left bank which would have been the largest irrigating channel in India. The project as drawn up did not meet with the approval of the technical advisers of the Secretary of State and it is being further investigated by the Bombay Engineers.

**Bombay Deccan.**—The Chankapur project has been finished; the Godavari canals are approaching completion, while work on the Pravara project is in progress. The Nira Right Bank canal project was sanctioned and commenced in 1912. In respect of size and cost it is the most important irrigation work of the protective class undertaken in India. The work involves the enlargement of the reservoir on Lake Whiting, which feeds the existing left bank canal, so that the capacity of the reservoir will be increased from 5,300 to 24,800 million cubic feet. A canal 100 miles long will be constructed and the waters will be distributed by 4 branches and 63 distributaries. The work, which is estimated to cost 257 lakhs of rupees and to occupy eleven years in construction, will afford protection to a tract in the Sholapur district which has the reputation of being one of the most liable to famine in the whole of India. Another important protective scheme the Gokak canal has recently been sanctioned by the Secretary of State. It contemplates the protection of some 493,000 acres in the Bijapur and Belgaum districts in British territory and in the Native States of Kolhapur, Mudhol, Jamkhandi, Sangli and Kurundwad at a cost of Rs. 197 lakhs.

**Madras.**—The Commission recommended the investigation of three very important works for this presidency; viz., the Tungabhadra project, and the Kistna and the Cauvery Reservoir projects. Detailed investigations have shown that the first could not be carried out except at prohibitive cost and the project has accordingly been abandoned. The other two promise to prove productive. The plans and estimates of the Cauvery project, which will involve the construction of the largest dam of its kind in the world, have been approved by the technical advisers of the Government of India. The consideration of the project cannot, however, be further proceeded with until a settlement has been arrived at in respect of the claims of the Mysore Durbar in the waters of the Cauvery River. Plans and estimates for the Kistna Reservoir project have also been prepared and are being revised in the light of certain suggestions made by the Inspector General of Irrigation in India. A project to reclaim Divi Island, a fertile deltaic tract at the mouth of the Kistna, by means of flood banks and to irrigate this area by a pumping installation, which was approved by the Irrigation Commission, has been carried out. The work is now in operation.

**United Provinces.**—The Commission delineated in rough outline a project for the utilization of the waters of the Sarla river in Oudh for supplementing the supplies of canal systems which derive their water from the Ganges and Jumna rivers. The proposals were thoroughly investigated, and a project estimated to cost some 6½ crores was prepared on the lines suggested by the Commission. In view of certain difficulties inherent in this scheme the Government of the United Provinces has drawn up an alternative project, estimated to cost Rs. 280 lakhs, which is now engaging consideration.

The Commission recommended the investigation of canals from the rivers flowing through Bundelkhand, and the Mirzapore and Allah-

**bad Districts.** The investigations have resulted in the execution of the Ken and Dhasan canals, the Dhukwan Reservoir project, and many other smaller schemes. The result is that the *trans-Jumna* Districts of these Provinces which were previously so liable to famine, are now fairly well protected.

**Central Provinces.**—A number of small but very useful tanks designed to protect precarious tracts from famine have come into existence as a result of the measures taken on the Commission's recommendation. In addition, three large canal systems known as the Tendula, the Weinganga and the Mahanadi canals, which will derive their supplies from the rivers after which they have been named, have been sanctioned. The last named has already come into operation.

### Irrigation Dues.

The charges for irrigation, whether taken in the form of enhanced land revenue or of occupiers' and owners' rates, vary very much, depending on the kind of crop, the quantity of water required for it and the time when it is required, the quality of the soil, the intensity or constancy of the demand, and the value of irrigation in increasing the outturn. In the immediate vicinity of Poona a rate of Rs. 50 an acre is paid for sugarcane. This is quite an exceptional rate, it obtains over only a limited area, and is made practicable only because the cultivators, by high manuring, can raise a crop valued at nearly eight-hundred rupees an acre. On other parts of the Mutha canal the rate varies from Rs. 40 to Rs. 12, and on other canals in the Bombay Deccan from Rs. 25 to Rs. 10 per acre. In Madras the maximum rate for sugarcane is Rs. 10, and in the Punjab it does not exceed Rs. 8-8. The rate charged for

rice varies in Madras from Rs. 5 to 2, and in Bengal from Rs. 2-8 to Rs. 1-8 per acre. In both these provinces irrigation is practically confined to rice; in the Punjab, where this crop is not extensively grown, the rate varies from Rs. 7 to Rs. 3-4 per acre. The ordinary rate in the Punjab for wheat, which is the principal crop, varies from Rs. 4-4 to Rs. 3-12, and for fodder crops from Rs. 3 to 2-8 per acre. The average rate realised from major works for irrigation of all kinds is about Rs. 3-8 per acre, the provincial averages being Rs. 1-9 in Sind and Bengal; Rs. 3-4 in the Punjab; Rs. 4-8 in Madras, the United Provinces and the Bombay Deccan. The charges for irrigation may be taken as varying from 10 to 12 per cent. of the value of the crop, except in Bengal and the Bombay Deccan, where the average is little more than six per cent.

### Canals and Navigation.

Twenty years ago a great deal was heard about the desirability of constructing navigation canals, either in conjunction with irrigation, or for transport, pure and simple. The idea is now exploded. It received a certain stimulus from the unprofitable character of Indian railways, and the handsome earnings of the irrigation works; it received its quietus when the railways turned the corner. Broadly speaking it may be said that navigation and irrigation rights clash; navigation is not only costly, but it cannot be maintained during the season of short supply, except to the detriment of irrigation. Outside the deltaic tracts of Bengal, Orissa, Madras and Sind, navigable canals will never be of much use for the purpose of inland navigation. There is however considerable scope for connecting canals to improve the facilities for navigation on the great river system of Eastern Bengal. This is a question which is now engaging the attention of the Government.

## WELLS AND TANKS.

So far we have dealt only with the great irrigation schemes. They are essentially exotic, the products of British rule; the real eastern instrument is the well. The most recent figures give thirty per cent. of the irrigated area in India as being under wells. Moreover the well is an extremely efficient instrument of irrigation. When the cultivator has to raise every drop of water which he uses from a varying depth, he is more careful in the use of it; well water exerts at least three times as much duty as canal water. Again, owing to the cost of lifting, it is generally used for high grade crops. It is estimated that well-irrigated lands produce at least one-third more than canal-watered lands. Although the huge areas brought under cultivation by a single canal scheme tend to reduce the disproportion between the two systems, it must be remembered that the spread of canals increases the possibilities of well irrigation by adding, through seepage, to the store of subsoil water and raising the level.

### Varieties of Wells.

Wells in India are of every possible description. They may be just holes in the ground, sunk to subsoil level, used for a year or two and then allowed to fall into decay. These are temporary or *kacha* wells or they may be lined with timber, or with brick or stone. They vary from the *kacha* well costing a few rupees,

to the masonry well, which will run into thousands, or in the sandy wastes of Bikanir, where the water level is three hundred feet below the surface, to still more. The means of raising the water vary in equal degree. There is the *puotlah*, or weighted lever, raising a bucket at the end of a pivoted pole, just as is done on the banks of the Nile. This is rarely used for lifts beyond fifteen feet. For greater lifts bullock power is invariably used. This is generally harnessed to the *mot*, or leather bag, which is passed over a pulley overhanging the well, then raised by bullocks who walk down a ramp of a length approximating to the depth of the well. Sometimes the *mot* is just a leather bag, more often it is a self-acting arrangement, which discharges the water into a sump automatically on reaching the surface. By this means from thirty to forty gallons of water are raised at a time, and in its simplicity, and the ease with which the apparatus can be constructed and repaired by village labour, the *mot* is unsurpassed in efficiency. There is also the Persian wheel, an endless chain of earthenware pots running round a wheel. Recently attempts have been made, particularly in Madras, to substitute mechanical power, furnished by oil engines, for the bullock. This has been found economical where the water supply is sufficiently large, especially where two or three wells can be linked. Government have systematically

encouraged well irrigation by advancing funds for the purpose and exempting wellwatered lands from extra assessment due to improvement. These advances, termed *inkari*, are freely made to approved applicants, the general rate of interest being  $6\frac{1}{2}$  per cent. In Madras and Bombay ryots who construct wells, or other works of agricultural improvement, are exempt from enhanced assessment on that account. In other provinces the exemption lasts for specific periods, the term generally being long enough to recoup the owner the capital sunk.

### Tanks.

Next to the well, the indigenous instrument of irrigation is the tank. The village or the roadside tank is one of the most conspicuous features in the Indian scene. The Indian tank may be any size. It may vary from a great work like Lakes Fife and Whiting in the Bombay Presidency or the Periyar Lake in Travancore, holding up from four to seven billion cubic feet of water, and spreading their waters through great chains of canal, to the

little village tank irrigating ten acres. They date back to a very early stage in Indian civilisation. Some of these works in Madras are of great size, holding from three to four billion cubic feet, with water spreads of nine miles. The inscriptions of two large tanks in the Chingleput district of Madras, which still irrigate from two to four thousand acres are said to be over 1,100 years old. Tank irrigation is practically unknown in the Punjab and in Sind, but it is found in some form or other in all other provinces, including Burma, and finds its highest development in Madras. In the ryotwari tracts of Bombay and Madras all but the smallest tanks are controlled by Government. In the zemindari tracts only the large tanks are State works. According to the latest figures the area irrigated from tanks is about eight million acres, but in many cases the supply is extremely precarious. So far from tanks being a refuge in famine they are often quite useless inasmuch as the rainfall does not suffice to fill them and they remain dry throughout the season.

## CANAL COLONIES.

The canal colonies represent the extreme case of improvement in agricultural conditions effected by irrigation. In the Punjab uplands now watered by the Lower Chenab and Lower Jhelum Canals, irrigation has completely altered the face of the country, so that it supports in unparalleled prosperity a population numbering a hundred to every one of its former poverty-stricken denizens, while land once refused as a gift sells with ease at £15 an acre. The largest of the canal colonies, the Chenab Colony, on the Lower Chenab Canal, lies in the *kechra* Doab, between the Chenab and Ravi Rivers, and has a total area of some 3,900 square miles. This area was until 1892 sparsely inhabited by nomad pastoral tribes, whose total numbers were estimated at less than 70,000. Cultivation was rendered possible only by the construction of the Chenab Canal. As fast as the canal and its distributaries were constructed, the land (which was waste and owned by Government) was allotted to various classes of grantees, the bulk of the grants being made to immigrant peasants, including men from the best agricultural districts in the Province. Since its foundation the colony has enjoyed remarkable prosperity. The nomads to whom a large portion of the land was allotted, though without any previous knowledge of agriculture, assimilated the practices of their new neighbours with extraordinary success, and the whole colony is now as well cultivated as almost any part of India.

The Jhelum Canal Colony, on the Lower Jhelum Canal, occupies some 900 square miles of State land in the Shahpur District, and is a more recent development. Colonisation began in 1902, and was conducted on lines similar to those adopted in the Chenab Colony, but a large proportion of the grants were made on the condition that a suitable mare should be maintained for breeding purposes.

The Chunan Colony, a much smaller colony on the Bari Doab Canal in the Lahore District dating from 1897, was returned in 1912 as having a total allottable area of less than 180

square miles, of which practically the whole had been allotted. The population was 16,458 in 1901 and 43,494 in 1911.

Other old canal colonies in the Punjab such as the Sohag-Para Colony in the Montgomery district, and the Sidhnal Colony in the Mooltan district, had by the beginning of the period under review reached their full development and become merged in the surrounding districts. Before the end of the decade colonisation in the newer colonies also had been practically completed, and their administration had been almost completely assimilated to that of ordinary districts.

Colonisation has also been carried out on a considerable scale since 1901 on the Jamrao, Nasrai, and Dad Canals in Sind.

Schemes for colonisation on the canals included in the Punjab Triple Canal Project, the Upper Jhelum, the Upper Chenab and the Lower Bari Doab are now in progress have been prepared.

A concession of some importance was made to peasant colonists in the Punjab in 1910, when it was decided to allow them to purchase proprietary rights, on very favourable terms, in all colonies except the Jhelum Colony. The concession was made possible by the passing of the Alienation of Land Act, which secures in another way the result that the former restriction of the peasant's right to an inalienable right of occupancy was intended to achieve.

In the last Administration Report for the Punjab, the condition of these colonies is thus described:—During the year under review sanction was given to the schemes for the colonisation of the areas commanded by the Lower Bari Doab Canal and the Upper Jhelum Canal, and a new stage in colony history may be said to have commenced. Questions of allotment and arrangements for settling the new colonists once more came into prominence. Progress was delayed on the Lower Bari Doab owing to the damage done by the floods to the Upper Jhelum Canal Head-Works. Still 146,156 acres were allotted. The area reserved for Military grant



test was increased from 108,000 to 178,000 acres in order to make more liberal provision for services in the present war and it is believed that this measure has had considerable effect in stimulating recruiting in the Province.

A particular feature of the Lower Bari Doab Colonisation scheme is the number of special grants of considerable areas for such purposes as horse breeding, cattle breeding, cotton farming and steam ploughing. The excellent start made by Captain Vanrenen on his horse breeding grant is a hopeful augury for future success. The conditions of the horse and mule breeding grants in the Jhelum and Chenab Colonies are now more carefully observed. It was only found necessary to confiscate one such grant during the year. Colonists continue to avail themselves freely of the right to purchase.

In Lyallpur nearly 10,000 acres were sold by the recent purchasers. The average price was Rs. 167 per acre for land which was purchased from Government at Rs. 12-8-0 in the case of peasant, and Rs. 20-10-0 in the case of other grantees. The fact that in spite of the large profits obtainable transfers were not more frequent than they were is strong evidence of the attractions of the colony. The re-assessments of the Chenab Colony were successfully completed during the year, and the fictitious agitation of 1913 appears to have completely subsided.

The activity of the various colony towns in providing drainage and water-supply schemes and in improving sanitation generally is creditable to them. It was decided to offer free sites in the proposed Mandis in new colony towns to persons willing to construct grain elevators.

## PRESENT POSITION OF IRRIGATION.

During the year 1914-15 the total area irrigated by all the productive public works, excluding branches in Native States of the Punjab amounted to 16,608,700 acres. Towards this total the Punjab canals contributed 7·3 million acres, Madras 3·4, the United Provinces 3 and Sind 1·8 million acres. In Bihar and Orissa an area of 908,400 acres was attained. The return on capital is highest in the Punjab, where the canals yielded 14·70 per cent. The next province in this respect is Madras, where a return of 12·62 per cent. was realised, excluding the Kurnool and Barur systems referred to in paragraph 2, expenditure on which is charged to Revenue. In the United Provinces and Sind the returns realised were 8·71 per cent. and 6·18 per cent. respectively. Details regarding other provinces and administrations will be found in Statement I. The return of productive works as a whole, excluding those under construction and not earning revenue, was 8·97 per cent. on the capital outlay.

**Protective Works.**—There were in operation in the year under review 29 protective works which together irrigated a total of 515,300 acres. The most important works are the Bantek reservoir in the Central Provinces, the Betwa and Ken canals in the United Provinces, the Bushikulya in Madras, and the Nira and Godavari systems in the Bombay Presidency. A number of small but interesting tank works are to be found in the Central Provinces. They were sanctioned as experimental works, in accordance with the recommendations of the Irrigation Commission, in order to test how far the people were willing to resort to irrigation for the maturing of their crops and what water rates they were prepared to pay. The results obtained are gratifying and show that the people are beginning to realise the great advantages of irrigation.

**Minor Works.**—There were 117 works so classed in 1914-15, the majority of which are in Bombay and Madras. Nine are purely navigation works. The net revenue paid by works of this category amounted to Rs. 84,90,144 (excluding navigation canals) or a return of 8·59 per cent. on the capital outlay, against 7·66 per cent. in the previous year. Nearly all the minor works in Sind return exceptionally high percentages. It is in contemplation to

transfer these to the Major Works class as soon as it is possible to amalgamate them with certain large projects which are in contemplation. The total area served by works of this class was 2,189,400 acres. This figure includes the area shown under Burma, viz., 400,621 acres, which is not under actual irrigation, but represents the area of cultivation on lands reclaimed by river flood embankments.

There are numerous works which maintain only revenue accounts. They are credited with a share of the land revenue depending on their maintenance and are debited with all expenditure incurred on construction, extension, improvements and maintenance. During the year reviewed these works irrigated an area of nearly 3 million acres and returned a net revenue of Rs. 37,74,017.

Practically all the works of the class which have neither capital nor revenue accounts are situated in the Madras Presidency. They consist of some 37,000 tanks and irrigation channels, mainly the former, the improvements and repairs of which are executed by the Public Works Department, except in the case of the smaller works which are maintained by Civil Officers. The areas irrigated by works of this class in 1914-15 aggregated to 3,401,200 acres. The area irrigated in 1913-14 was 3,275,200 acres.

**Triple Project.**—The Lower Chenab canal maintains its reputation as a productive investment. It irrigated 2,312,213 acres and earned a gross revenue of nearly 156 lakhs, giving a percentage of 41·81 on its capital cost.

The Lower Jhelum canal is steadily improving; the net percentage of profits was 21·80 and the area irrigated 821,488 acres.

The triple project is nearing completion. The Upper Chenab canal was formally opened in 1912; the Lower Bari Doab canal was opened in 1913 but had to depend on Ravi supplies until the completion of the tail reach of the Upper Chenab canal in the year under report permitted it to share in the surplus waters of the Chenab. The Upper Jhelum canal being incomplete, supplies from the Jhelum river were not available. The Chenab River rose earlier and fell later than usual and this helped to increase the irrigated area on the Upper Chenab and Lower Bari Doab canals, on which the progress of irrigation was, on the whole, satisfactory.

On the Upper Jholum canal the construction work proceeded satisfactorily. The bund on the foreshore at Mangla was breached in April 1914 and flooded the foundations of the regulator and the deep cutting beyond. The bund was re-built, though operations were handicapped by a rising river, and since its completion the progress has been steady and rapid. The regulator was finished in November 1915 and the canal was formally opened by His

Excellency the Viceroy early in December 1915.

**The Deccan.**—The construction of new protective irrigation works in the Deccan is being pushed forward as quickly as possible. The schemes now in hand are the Godavari canals (nearly finished), the Pravara canals and the Nira Right Bank canal. The Gokak canal extension project has been sanctioned but not yet commenced.

### Results of irrigation works in operation.

The following table summarises the results of irrigation works for all India during 1914-15 in comparison with those of the two previous years:—

Class of work.	Capital outlay to end of the year on works in operation.	Gross revenue during the year.	Net revenue during the year.	Percentage of net revenue of capital outlay to end of year.	Net profit during the year, i.e., net revenue less interest charges.	Area irrigated.
	Rs.	Rs.	Rs.	Per cent.	Rs.	Acres.
I.—Productive ..	50,67,03,787	6,55,66,202	4,54,69,330	8.97	2,86,51,432	10,608,700
II.—Protective ..	6,54,61,092	15,31,931	3,85,191	0.59	—17,71,394	515,300
III.—Minor works for which capital and revenue accounts are kept (including works under construction).	6,78,81,681	54,72,681	30,67,727	4.52	15,02,689	2,189,400
IV.—Minor works for which only revenue accounts are kept.	....	69,53,984	37,74,017	....	....	2,894,106
V.—Works for which neither capital nor revenue accounts are kept.	....	2,07,55,939	99,38,075	....	....	3,401,200
Total 1914-15 ..	64,00,46,560	10,02,80,767	6,26,34,340	(a) 7.64	2,84,72,727	25,578,700
Total 1913-14 ..	61,21,21,482	9,46,71,850	6,37,70,873	(a) 8.22	....	24,913,400
Total 1912-13 ..	59,56,13,099	8,83,43,533	5,76,98,032	(a) 8.08	....	24,515,185

(a) Percentage calculated on works of classes I, II and III.

### Expenditure by the State.

The subjoined table exhibits the outlay incurred by the State during the year 1914-15 on all classes of irrigation works:—

		Capital outlay (direct charges).	Minor additions, maintenance, and working expenses (direct charges).
	Works under construction.	Rs.	Rs.
Productive ..	.. .. .	68,07,105	....
Protective ..	.. .. .	62,71,727	....
Minor ..	.. .. .	9,64,743	....
	Total ..	1,40,43,575	....
	Works in operation.		
Productive ..	.. .. .	1,01,79,389	1,89,98,636
Protective ..	.. .. .	19,56,781	11,07,347
Minor ..	.. .. .	10,56,134	23,34,996
	Total ..	1,31,92,304	2,24,40,919
Works under classes IV and V ..	.. .. .	....	88,97,348
	Grand Total ..	2,72,85,879	3,13,88,762

## Value of the Crops.

A comparison of the acreage of crops matured by means of the Government irrigation systems, with the total area under cultivation in the several provinces, is given below :—

Province.	Net area cropped.	Area irrigated by Government irrigation works.	Percentage of irrigated area to total cropped area.	Capital cost of Government irrigation works to end of 1913-14 in lakhs of rupees.	Estimated value of crops raised on areas receiving State irrigation, in lakhs of rupees.
	Acrea.	Acres.	Per cent.		
Burma .. ..	14,239,000	1,263,000	8.9	212	367
Bengal .. ..	25,208,000	100,000	0.4	236	46
Bihar and Orissa ..	8,070,000	998,000	12.3	671	534
United Provinces of Agra and Oudh.	25,562,000	3,267,000	9.2	1,218	1,546
Ajmer-Merwara ..	874,000	26,000	6.0	35	9
Punjab .. ..	28,127,000	8,389,000	29.8	1,723	2,770
North-West Frontier ..	3,142,000	245,000	7.8	242	104
Sind .. ..	4,175,000	3,754,000	89.9	321	554
Bombay Deccan ..	23,858,000	301,000	1.3	472	184
Central Provinces (excluding Berar).	18,060,000	40,000	0.2	140	15
Madras .. ..	30,000,000	7,179,000	18.4	1,094	1,766
Baluchistan .. ..	24,000	8,000	33.3	86	2
Total .. ..	199,953,000	25,570,000	12.8	6,400	8,197

## Land for Soldiers.

On October 13th, 1915, the Government of India issued, in a more complete form than has hitherto been available, a summary of their colonization policy, which is of special interest in relation to the provision of land for ex-soldiers. In the course of this they said :—

The older canals left unirrigated the upper portions of the Jech and the Rechna Doabs and the lower parts of the Bari Doab. The canals the triple project—the upper Jhelum, the upper Chenab and the lower Bari Doab canals—will bring water to much of the land in the hitherto unwatered portions of these three Doabs. The first and second of the canals, though they will irrigate some 350,000 and 650,000 acres, respectively, give little scope for schemes of colonization as the areas of the Government wasteland included within the limits of irrigation are comparatively speaking small. On the lower Bari Doab canal, however, the area available for colonization is something like 1,200,000 acres. The bulk of the land, about 750,000 acres (or 30,000 rectangles of 25 acres apiece) is to be given out on terms which will encourage the breeding of horses and mules. About 12,000 rectangles will be distributed, for the most part in grants of one rectangle each, to peasant colonists and ex-soldiers for cultivation. No conditions in regard to horse and mule-breeding will attach to the tenure of these rectangles, but the grantees will be eligible for extra rectangles to which such condition apply. Of these 17,000 rectangles about 7,000 have been set apart for ex-soldiers and for the rest selections have already been made from the peasants of districts lying west of the Sutlej.

Of the remaining 10,000 rectangles 7,000 will constitute the horse and mule-breeding grants. For these the holders of the 17,000 rectangles mentioned above will compete. The land will be given out on ten years' leases on condition that the tenant of each rectangle maintains a mare. A large proportion of the competitors will be military men. The strong military element among the colonists should go a long way to ensure the success of this part of the scheme. Ex-cavalry men, especially, should make first rate breeders. The soldier grantees will be selected by the military authorities, after the war, and will probably be for the most part retired officers and non-commissioned officers.

There are only about 78,000 acres of Government land irrigated by the Upper Chenab Canal and of this 42,000 acres will receive perennial irrigation, whilst the remainder will be irrigated for the kharif harvest only. On the Upper Chenab Canal and on the Upper Jhelum Canal no more than 40,000 acres is available for colonization. Out of this provision has been made up to a maximum of 15,000 acres for reward grants to persons in the Rawalpindi division who rendered assistance to the criminal administration, 5,000 acres are to be given as compensation grants and another 6,000 acres will be kept in reserve for rewards to the army. 6,000 acres have been provided for tenants now holding land on the Lower Jhelum Canal, whom it is desired to remove in order to allow for the extension of certain regimental horse runs. 1,000 acres are desired for special reward grants to military officers, and the balance will provide for grazing grounds and miscellaneous requirements.

## Projects under Investigation.

Province.	Name and probable classification of work.	Estimated or approximate direct cost in lakhs of rupees.	Irrigable area in acres.	Districts benefited.	Principal crops that will be produced.
Madras	Cauvery reservoir project ..	Productive ..	370	Tanjore .. ..	Rice.
	Kistna reservoir project ..	Do. ..	800	Kistna and Guntur ..	
	Lower Bhavani ..	Do. ..	109	Coimbatore .. ..	
	Velgode project ..	Do. ..	28	Kurnool .. ..	
	12 smaller schemes ..	Mainly protective.	344	Ganjam, Nellore, Kurnool, Coimbatore, Anantapur and Salem.	
Bombay	Mutha Right Bank canal extension.	Productive ..	175	Poona .. ..	Sugarcane, groundnut, bajri, jowari, wheat, rice, gram, etc. Sugarcane, garden crops, rice and hot weather crops.
	Right Bank canal from the Bombay Hydro-Electric scheme.	Minor ..	27	Thana and Kolaba ..	
	Robri canal, Sukkur Barrage and widening Eastern Nara Supply channel ..	Productive ..	762	The whole of the Left Bank Division comprising three Revenue districts, viz., Nawabshah, Hyderabad and Thar and Parkar.	
Sind	Sultanwah, Begari canal ..	Do. ..	16	Sukkur and Upper Sind Frontier.	Rice, jowari, bajri, wheat and oil seeds.
Bengal	Damodar canal ..	Do. ..	40	Burdwan .. ..	
Bihar and Orissa	Extension of the Tribeni canal.	Protective ..	16	Champan .. ..	Do.
	Karamnasa project ..	Do. ..	7	Shahabad .. ..	Do.
United Provinces	Belan canal ..	Do. ..	15	Khairagarh Pargana, Allahabad district.	Rice and wheat.

## Projects under Investigation—contd.

Province.	Name and probable classification of work.	Estimated or approximate direct cost in lakhs of rupees.	Irrigable area in acres.	Districts benefited.	Principal crops that will be produced.
United Provinces and Punjab.	Sarda-Ganges, Jumna - Productive feeders projects.	646	1,524,000	<i>In the United Provinces—</i> Rampur State, Pilibhit, Shahjahanpur, Hardoi, Bareilly, Moradabad, Budaula, Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Mathura, Agra, Etah, Mainpuri, Farukhabad, Etawah, Cawnpore, Fatehpore and Allahabad.	All the principal crops grown in the United Provinces.
Alternative..				<i>In the Punjab—</i> Gurgaon, Karnal, Delhi, Rohtak, Hissar, Patiala and Jhind States.	
United Provinces..	Sarda-Kicha Feeder and Sarda canal for Oudh.	721	1,645,000	Pilibhit, Shahjahanpur, Kheri, Bareilly, Hardoi, Lucknow, Unao, Rae Bareilly, Sultanpur, Paragarh, Sitapur and Bara Banki.	Do.
Punjab	Sutlej Valley project	875	3,000,000	Lahore, Ferozepore, Montgomery, Multan, Bikaner and Bahawalpur States.	Wheat, gram, jowar and cotton.
Murma	Remodelling the Kinda canal.	15	85,000	Kyaukse	Rice.
Central Provinces..	Panzoli Nalla tank-project.	24	31,400	Bhandara	Do.
	Deena Nadi Tank Project	20	35,000	Chanda	Rice and Sugarcane.
	Uskal & Gangulpata Combined.	10	27,395	Balaghat	Rice.
	Hasdeo river scheme	258	360,000	Bilaspur	Rice and sugarcane.
Baluchistan ..	Anambar reservoir project.	32	80,000	Loralai	Wheat and barley.
	Toral reservoir project	18	44,000	Do.	Wheat, barley and jowar.
	Gamboli reservoir project.	60	218,000	Sibi	Wheat and barley.
	Zhob project	63	209,964	Zhob	Wheat, barley and jowar.
	Barshore reservoir project.	16	Supplement to Khush-dikhani.	Quetta Peshin	Wheat and barley.
Total		4,746 to 4,821	10,463,659 to 10,584,659		

## BUILDINGS AND ROADS.

The Buildings and Roads branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1914-15 under the various heads is shown in the following table:—

	Central Pro- vinces and Berar.	Burma.	Assam.	Bengal.	Bihar and Orissa.	United Pro- vinces Agra and Oudh.	Punjab.	North- West Frontier Pro- vince.	Madras.	Bombay.	India General.	Total.
Imperial .. ..	£ 72,050	£ 49,661	£ 2,533	£ 89,409	£ 26,255	£ 74,920	£ 37,148	£ 208,198	£ 36,842	£ 80,536	£ 230,674	£ 908,226
Provincial* .. ..	£ 529,551	£ 775,734	£ 364,270	£ 831,581	£ 664,327	£ 507,741	£ 610,853	£ ..	£ 1,086,986	£ 756,747	£ ..	£ 6,127,790
Total .. ..	£ 601,601	£ 825,395	£ 366,803	£ 920,990	£ 690,582	£ 582,661	£ 648,001	£ 208,198	£ 1,123,828	£ 837,283	£ 230,674	£ 7,036,016
Expenditure by Civil Officers from Imperial Funds .. ..												£ 52,995
Expenditure in England .. ..												£ 87,739
Grand Total .. ..												£ 7,176,750

\* Includes expenditure by the Civil Department in addition to that by the Public Works Department.

The extension of local Government in India has thrown a large portion of the smaller class of public works into the hands of the local Boards. Speaking generally, the boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works Officers.

# Posts and Telegraphs.

## POST OFFICE.

The control of the Posts and Telegraphs of India is vested in an officer designated Director-General of Posts and Telegraphs who works in subordination to the Government of India in the Department of Commerce and Industry. The superior staff of the Direction, in addition to the Director-General himself, consists on the postal side of two Deputy Directors-General (who are officers of the rank of Postmaster-General), four Assistant Directors-General (whose status is similar to that of Deputy Postmasters-General), and two Personal Assistants (who are selected from the staff of Superintendents).

For postal purposes, the Indian Empire is divided into eight circles as shown below, each in charge of a Postmaster-General—Bengal and Assam, Bihar and Orissa, Bombay, Burma, Central, Madras, Punjab and North-West Frontier, and United Provinces. The Central Circle comprises roughly the Central Provinces and the Central India and Rajputana Agencies.

The Postmasters-General are responsible to the Director-General for the whole of the postal arrangements in their respective circles, with the exception of those connected with the conveyance of mails by railways and inland steamers which are entrusted to four officers bearing the designation of Inspector-General, Railway Mail Service and Sorting. All the Postmasters-General are provided with Personal Assistants, while those in charge of the largest circles are also assisted by Deputy Postmasters-General. The eight Postal Circles and the jurisdictions of the four Inspectors-General are divided into Divisions each in charge of a Superintendent; and each Superintendent is assisted by a certain number of officials styled Inspectors or Assistant Superintendents.

Generally there is a head post office at the head-quarters of each revenue district and other post offices in the same district are usually subordinate to the head office for purposes of accounts. The Postmasters of the Calcutta, Bombay, and Madras General Post Offices and of the larger of the other head post offices are directly under the Postmaster-General and the least of them exercises the same powers as a Superintendent of Post Offices in respect of inspections, appointments, leave and punishment.

The Inland Tariff (which is applicable to

Ceylon and Portuguese India except as indicated below) is as follows:—

ments. The Presidency Postmasters, indeed, have one or more Superintendents subordinate to them. When the duties of the Postmaster of a head office become so onerous that he is unable to perform them fully himself, a Deputy Postmaster is appointed to relieve him of some of them and if still further relief is required, one or more Assistant Postmasters are employed. The more important of the offices subordinate to the head office are designated sub-offices and are usually established only in towns of some importance. Sub-offices transact all classes of postal business with the public, submit accounts to the head offices to which they are subordinate, incorporating therein the accounts of their branch offices, and frequently have direct dealings with Government local sub-treasuries. The officer in charge of such an office works it either single-handed or with the assistance of one or more clerks according to the amount of business.

Branch offices are small offices with limited functions ordinarily intended for villages, and are placed in charge either of departmental officers on small pay or of extraneous agents, such as school-masters, shopkeepers, landholders or cultivators who perform their postal duties in return for a small remuneration. The audit work of the Post Office is entrusted to the Accountant-General, Posts and Telegraphs, who is an officer of the Finance Department of the Government of India and is not subordinate to the Director-General. The Accountant-General is assisted by Deputy Accountants-General, all of whom, with the necessary staff of clerks, perform at separate headquarters the actual audit work of a certain number of postal circles.

In accordance with an arrangement which has been in force since 1833, a large number of sub-post offices and a few head offices perform telegraph work in addition to their postal work and are known by the name of combined offices. The policy is to increase telegraph facilities everywhere and especially in towns by opening a number of cheap telegraph offices working under the control of the Post Office. The telegraph expenditure on account of these combined offices is borne by the Telegraph Department to which the whole of their telegraph revenue is also credited.

Ceylon and Portuguese India except as indicated below) is as follows:—

Letters.	When the postage is prepaid.	When the postage is wholly unpaid.	When the postage is insufficiently prepaid.
Not exceeding 1 tola .. .. .	Anna.	} Double the prepaid rate (chargeable on delivery.)	} Double the deficiency (chargeable on delivery.)
Exceeding 1 tola but not exceeding 10 tolas .. .. .	1		
Every additional 10 tolas or part of that weight .. .. .	1		
Book and pattern packets. Every 10 tolas or part of that weight..	½		

Postcards.			
Single	..	..	1 anna.
Reply	..	..	1 "

(The postage on cards of private manufacture must be prepaid in full).

## Parcels (prepayment compulsory).

	Rs.	a.
Every 40 tolas or part of that weight up to 440 tolas .. .. .	0	2
Exceeding 440 tolas but not exceeding 480 tolas .. .. .	3	0
Every additional 40 tolas or part of that weight up to 800 tolas .. .. .	0	4

(These rates are not applicable to parcels for Portuguese India).

## Registration fee.

For each letter, postcard, book or pattern packet, or parcel to be registered 0 2

## Ordinary Money Order fees.

On any sum not exceeding Rs. 5 .. .. .	0	1
On any sum exceeding Rs. 5 but not exceeding Rs. 10 .. .. .	0	2
On any sum exceeding Rs. 10 but not exceeding Rs. 15 .. .. .	0	3
On any sum exceeding Rs. 15 but not exceeding Rs. 25 .. .. .	0	4
On any sum exceeding Rs. 25 up to Rs. 600 .. .. .	0	4

for each complete sum of Rs. 25, and 4 annas for the remainder; provided that, if the remainder does not exceed Rs. 5, the charge for it shall be only 1 anna; if it does not exceed Rs. 10, the charge for it shall be only 2 annas and if it does not exceed Rs. 15, the charge for it shall be only 3 annas.

**Telegraphic money order fees.**—The same as the fees for ordinary money orders plus a telegraph charge calculated at the rates for inland telegrams for the actual number of words used in the telegram advising the remittance, according as the telegram is to be sent as an "Express" or as an "Ordinary" message.

In the case of Ceylon the telegraph charge is at the rate of Re. 1 for the first 12 words and 2 annas for each additional word. Telegraphic money orders cannot be sent to Portuguese India.

**Value-payable fees.**—These are calculated on the amount specified for remittance to the sender and are the same as the fees for ordinary money orders.

**Insurance fees.**—For every Rs. 50 of insured value 1 anna.

As regards Ceylon and Portuguese India see Foreign Tariff.

**Acknowledgment fee.**—For each registered article 1 anna.

**The Foreign Tariff** (which is not applicable to Ceylon except in respect of insurance fees or to Portuguese India except in respect of insurance fees and parcel postage) is as follows:—

## Letters.

To the United Kingdom, other British Possessions and Egypt, including the Sudan.	One anna for each ounce or part of that weight.
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To other countries, colonies or places.

2½ annas for the first ounce and 1½ annas for every additional ounce or part of that weight.

Postcards Single .. .. .	1 anna.
" Reply .. .. .	2 annas.

**Printed Papers.**—½ anna for every 2 ounces or part of that weight.

**Business Papers.**—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 2½ annas for each packet.

**Samples.**—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 1 anna for each packet.

(The rates shown above are those chargeable when the postage is prepaid).

**Parcels.**—(Prepayment compulsory). The rates vary with the countries to which they are addressed. The rates to the United Kingdom are—

	Via Gibraltar.	Overland.
	Rs. a. p.	Rs. a. p.
Not over 3 lbs. ....	0 12 0	1 8 0
" " 7 " .. .. .	1 8 0	2 4 0
" " 11 " .. .. .	2 4 0	3 0 0

**Registration fee.**—2 annas for each letter, postcard, or packet.

**Money Orders.**—To countries on which money orders have to be drawn in rupee currency, the rates of commission are the same as in the case of inland money orders.

To countries on which money orders have to be drawn in sterling, the rates are as follows:—

	Annas.
Not exceeding £1 .. .. .	3
Exceeding £1 but not exceeding £2 .. .. .	5
" £2 " " " £3 .. .. .	8
" £3 " " " £4 .. .. .	10
" £4 " " " £5 .. .. .	12
" £5 .. .. .	12

for each complete sum of £5 and 12 annas for the remainder, provided that if the remainder does not exceed £1, the charge for it shall be 3 annas; if it does not exceed £2, the charge for it shall be 5 annas; if it does not exceed £3, the charge for it shall be 8 annas; and if it does not exceed £4, the charge for it shall be 10 annas.

## Insurance fees—

To countries other than those named below .. 3 annas for every £5.

To Ceylon and Portuguese India .. .. 2 annas per every Rs. 100.

To Mauritius, the Seychelles, Zanzibar, and the British East Africa, Uganda, and Somaliland Protectorates .. .. 4 annas per every Rs. 100

**Acknowledgment fee.**—2 annas for each registered article.



**Growth of the Post Office.**—At the end of 1895-96 the total number of post offices was 11,061 and the total length of mail lines 122,282 miles. For the 31st March 1916 the corresponding figures were 19,328 and 157,657. During the year 1895-96 the total number of letters, postcards, newspapers and packets given out for delivery was 410,293,038, while for the year 1915-16 the total number of unregistered articles of the same classes given out for delivery plus the number of registered letter and packets posted amounted to 1,038,537,251. The number of parcel mail articles given out for delivery in the former year was 3,577,207 as compared with 12,890,909 such articles posted during the latter year. The total number and value of money orders issued increased from 10,161,107 and Rs. 21,10,10,825 in 1895-96 to 32,322,594 and Rs. 58,06,36,207 respectively 1915-16. During the former year the total number of articles issued for transmission by post was 294,983 with an aggregate declared value of Rs. 8,72,31,573 and the corresponding figures for 1910-11 were 1,169,428 and Rs. 26,88,78,925. As the result, however, mainly

of the introduction—1911-12 of the rule under which inland articles containing currency notes or portions thereof must be insured, the figures for 1915-16 stand at 3,086,854 and Rs. 78,84,10,530. The number of accounts open on the books of the Post Office Savings Bank grew from 653,892 on the 31st March 1896 to 1,600,424 at the end of 1915-16 with an increase from Rs. 9,04,23,072 to Rs. 15,32,12,517 in the total amount standing at the credit of depositors. The total staff on the 31st March 1916 numbered 95,746. The net financial result of the working of the Post Office for the year 1915-16 was a surplus of Rs. 32,11,264.

This account of the activities of the Post Office would not be complete if it were not mentioned that on the 31st March 1916 there were 25,808 active Postal Life Insurance policies with an aggregate assurance of Rs. 3,67,75,594 and that during 1915-16 it disbursed a sum of Rs. 34,78,496 to Indian Military pensioners; collected at its over expense, a sum of Rs. 10,39,037 on account of customs duty on parcels and letters from abroad; and total 16,186 lbs. of quinine to the public.

## TELEGRAPH DEPARTMENT.

**Telegraphs.**—Up to 1912 the telegraph system in India was administered as a Separate Department by an officer designated Director General of Telegraphs who worked in subordination to the Government of India in the Department of Commerce and Industry. In that year it was decided to vest the control of Posts and Telegraphs in a single officer as an experimental measure with a view to the eventual amalgamation of the two Departments.

In pursuance of this policy an experimental amalgamation of the two services was introduced in the Bombay and Central Circles from the 1st July 1912. The fundamental principles of this scheme which followed closely the system in force in the United Kingdom and several other European countries were that the traffic and engineering work of the Telegraph Department should be separated, the former branch of work in each Circle being transferred to the Postmaster-General assisted by a Deputy Postmaster-General and a suitable number of attached officers and the engineering branch being controlled by a Director of Telegraphs in charge of the two Circles. Subordinate to this officer there were several Divisional Superintendents who were assisted by a number of attached officers.

In 1914 the complete amalgamation of the two Departments was sanctioned by the Secretary of State and introduced from 1st April. The superior staff of the Direction, in addition to the Director-General himself, consists on the engineering side of a Chief Engineer, Telegraphs, with an Assistant, and a Personal Assistant to the Director-General. For traffic work there are a Deputy Director-General, with an Assistant and an Assistant Director-General. In the Circles the scheme which has been introduced follows closely on the lines of the experimental one referred to above. For telegraph engineering purposes India is divided up into three Circles, each in charge of a Director of Telegraphs. For Burma special arrangements were con-

sidered necessary and the engineering work is in charge of the Postmaster-General who is a Telegraph officer specially selected for the purpose. These four Circles are divided into twenty Divisions each of which is in charge of a Superintendent of Telegraph Engineering.

The telegraph traffic work is now under the control of the Postmasters-General, each of whom is assisted by a Deputy Postmaster-General and a suitable staff of attached officers.

The audit work of the Telegraph Department is, like that of the Post Office, entrusted to the Accountant-General, Posts and Telegraphs, assisted by a staff of Deputy and Assistant Accountants-General.

**Inland Tariff.**—The tariff for inland telegrams is as follows:—

Private and State.				Address charged for.
	Ex-press.	Ordinary.		
	Rs. a.	Rs. a.		
Minimum charge	.. 1 0	0 8		
Each additional word over 12	.. 0 2	0 4		
Additional charges.				
Minimum for reply-paid telegram	.. 6 annas.			
Acknowledgment of receipt	.. 6			
Multiple telegrams, each 100 words or less	.. 4			
Collation	.. One quarter of charge for telegram.			
For acceptance of an Express telegram during the hours when an office is closed.	{ If both the offices of origin and destination are closed .. 2 If only one of the offices is closed .. 1			Rs.

Signalling by flag or sema- phore to or from ships—per telegram .. ..	.. 8 annas.
Boat hire .. ..	.. Amount actu- ally necessary.

Copies of telegrams, each 100  
words or less .. .. 4 annas.

Press.

Ex- press. Rs. a.	Ordi- nary. Rs. a.
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Minimum charge .. 1 0	0 8	} Address fee.
Each additional 6 words over 48 .. .. 0 2	0 1	

(Ceylon is not regarded as "Inland" but  
Portuguese India is.)

**Foreign Tariff.**—The charges for foreign  
telegrams vary with the countries to which they  
are addressed. The rates per word for private  
and state telegrams to all countries in Europe  
except Russia and Turkey are as follow:—

Private.	State.
Rs. a.	Rs. a.

Via Turkey .. ..	1 6	....
„ Indo .. ..	1 4	0 12
„ Eastern .. ..	1 4	0 10

**Growth Telegraphs.**—At the end of  
1895-96 there were 40,375 miles of line and  
143,189 miles of wire and cable, as compared  
with 86,067 and 337,720 miles, respectively,  
on the 31st March 1916. The numbers of  
departmental telegraph offices were 253 and  
196, respectively, while the number of telegraph

offices worked by the Post Office rose from  
1,208 to 3,223. The increase in the number  
of paid telegrams dealt with is shown by the  
following figures:—

		1895-96.	1915-16.
Inland ..	{ Private ..	3,466,679	13,996,050
	{ State ..	603,866	1,737,901
	{ Press ..	24,892	343,357
Foreign ..	{ Private ..	631,390	1,881,182
	{ State ..	6,985	62,807
	{ Press ..	3,422	22,091
		<hr/> 4,736,734	<hr/> 17,542,988

The outturn of the workshops during 1915-16  
represented a total value of Rs. 14,73,000. At  
the end of the year the total staff numbered  
10,756. The total capital expenditure up to the  
close of 1915-16 amounted to Rs. 12,72,47,181.  
The net revenue for the year was Rs. 43,50,990.

**Wireless.**—The total number of wireless  
telegraph stations open for traffic at the end of  
1915-16 was nineteen, viz., Port Blair, Rangoon,  
Diamond Island, Table Island, Victoria Point,  
Madras, Bombay, Sandheads (two), Calcutta,  
Karachi, Delhi, Simla, Allahabad, Lahore,  
Nagpur, Peshawar, Quetta, and Secunderabad.  
The total number of messages of all kinds  
disposed by the nine coast stations during the  
year was 65,538.

**Telephones.**—On the 31st December 1915  
the number of telephone exchanges established  
by the Department was 226, of which 61 with  
4,556 connections were worked departmentally.  
The number of telephone exchanges established  
by Telephone Companies was 13 with 10,766  
connections.

The broad characteristics of the trade of India are familiar to readers of the Indian Year Book. India is chiefly an agricultural country, for sixty-seven per cent. of its people are dependent on agriculture for their means of livelihood. Consequently the prosperity of the country is largely determined by the character of the monsoon rains. An area which grows larger every year is protected by irrigation, and the extension of these works, with the increased resisting power of the people and the growth of manufacturing industry is expected to make the people immune from the shock of such famines as those of 1896-97 and 1899-1900; but many of the irrigation works, such as tanks and wells, depend on the rains, for their replenishment. Consequently the trade of the year is mainly determined by the rains which decide the export trade and the consequent purchasing power of the people. Another feature which arises from these conditions is that the imports are mainly of manufactured goods and the exports of produce. The imports of manufactures in pre-war days chiefly came from the United Kingdom, whose exporting power has been seriously diminished by the diversion of the energies of the people to the war. A large part of the export in pre-war days went to the Continent of Europe, and that market was closed by the war. On these grounds then the trade conditions of 1915-16 were dominated by the war. It is in the relation of the trade of India to the war that we find the most profitable line of study in considering the history of the past year. The main conclusions are indicated in the annual review of Indian trade, by the Director of Statistics, Mr. G. Findlay Shirras, from which the following article is mainly drawn.

The general conclusion is that trade has adjusted itself successfully to the new conditions, and a war equilibrium, although an unstable one, has been established. The cessation of commercial relations with enemy countries,

the curtailment of trade with France and Belgium, the restriction of trade with neutral countries, and the dearth of tonnage still continue, and the necessity of Government intervention and control, a legacy of the previous year, has become still more close. The effects of the crisis occasioned by the outbreak of war have largely, if not entirely, died away. Although, with some exceptions, business was throughout the year difficult and anxious, there were none of the difficulties which the outbreak of war immediately caused last year. There was, for example, no recurrence of the great rush on Postal Savings Banks deposits. The total savings bank balances, including accruals of fresh interest were Rs. 36 lakhs in excess of the figure for 1st April 1915. There was no recurrence of a special demand for the encashment of currency notes. The average active circulation of notes on the contrary increased by Rs. 2.65 lakhs, as compared with the amount in circulation in 1914-15. Railway earnings, a valuable indication of the general movement of trade throughout the country, showed an increase of Rs. 3.32 lakhs or 5 per cent. over the previous year. The exchange position was, at last year, satisfactorily maintained.

The monsoon, which in a country whose mainstay is agriculture plays such an overwhelming part in the trade prosperity of the year, was, it may be noted, not very favourable. The South-West monsoon arrived late. It was weak and irregular in the northern parts of the Bombay Presidency, especially in Gujarat, in Sind, and in large areas of the Punjab. Another characteristic of the year was the expansion in the export trade which compares very favourably with the slow recovery in the import trade. The increase in the exports of jute, tea, wool, and hides and skins is noteworthy. The exports of tea, gunny bags and cloth and raw wool have reached a record figure.

### THE TRADE OF THE YEAR.

The total sea-borne trade of British India in 1915-16 amounted to Rs. 357 crores or £ 238 millions, as against Rs. 354 crores or £ 236 millions in 1914-15, and nearly Rs. 491 crores or £ 327 millions in 1913-14 when the highest figures were attained. These totals include merchandise and treasure, both on private and on Government account.

The total imports of merchandise on private and Government account in 1915-16 were Rs. 187½ crores or £ 91½ millions, the total exports of Indian produce, including Government

stores, Rs. 191½ crores or £ 129½ millions, and the re-exports of foreign goods Rs. 5½ crores or £ 3½ millions. The figures for the last three years are shown below.

The trade in treasure showed an increase of Rs. 2.94 lakhs or 55 per cent. in exports and a decline of Rs. 9.87 lakhs or 45 per cent. in imports. The total trade in treasure declined by Rs. 6.93 lakhs or 25 per cent. The details of imports and exports on private account are given in the following table:—

—	This year 1915-16.	Last year 1914-15.	Pre-war year 1913-14.	Increase (+) or decrease (—) in 1915-16 as compared with			
				1914-15.		1913-14.	
PRIVATE MERCHANDISE.	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Per cent.	Rs. (lakhs.)	Per cent.
Imports ..	1,81.34	1,87.93	1,83.25	—0.59	—5	—51.91	—28
Exports ..	1,92.53	1,77.48	2,44.20	+15.05	+8	—51.67	—21
Re-exports ..	4.85	4.11	4.68	+74	+18	+17	+4
TOTAL .	3,28.72	3,19.52	4,32.13	+920	+3	—1,03.41	—24

These figures show that there was an increase of 8 per cent. in exports, excluding re-exports and a decrease of 5 per cent. in imports, as compared with last year, and as compared with the year immediately preceding the outbreak of war. A fall of 21 per cent in exports, and of 28 per cent in imports. In making these comparisons the enormous rise in prices on the 1913-14 basis should be remembered.

**War and Trade.**—In last year's Review the year 1914-15 was divided into two periods, namely, the pre-war period (April to July), and the war period (August to March). The loss of trade during the latter period was shown to be largely if not entirely, due to the war, being Rs. 44 crores or £ 29 millions in imports. Rs. 70½ crores or £ 47 millions in exports, and Rs. 62 lakhs or £ 400,000 in re-exports. A similar comparison is made in the following table to show how far India has gained or lost in the same periods of 1915-16:—

	1913-14.		1914-15.		1915-16.		Increase + or decrease— as compared with 1913-14, in	
							1914-15.	1915-16.
	April to July.	August to March.	April to July.	August to March.	April to July.	August to March.	April to July.	August to March.
PRIVATE MERCHANDISE.	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)	Rs. (lakhs.)
Imports ..	56.05	1,27.20	54.77	83.16	40.26	91.08	-1.28	-44.04
Exports ..	78.12	1,66.08	82.01	95.47	60.04	1,32.49	+3.89	-70.61
Re-exports ..	1.54	3.11	1.59	2.52	1.42	3.43	+5	-62
TOTAL ..	1,35.71	2,96.42	1,38.37	1,81.15	1,01.72	2,27.00	+2.00	-1,15.27

**Rapid Recovery.**—The actual loss during the latter period (August to March) of 1915-16, as compared with 1913-14, was Rs. 36.12 lakhs or 28 per cent. in imports and Rs. 33.59 lakhs or 20 per cent. in exports, while re-exports improved by Rs. 29 lakhs or 9 per cent.

The improvement in the same period of 1915-16 was, however, in marked contrast with 1914-15, namely, Rs. 792 lakhs in imports, Rs. 37.02 lakhs in exports, and Rs. 91 lakhs in re-exports. The falling off in the value of both imports and exports took place mainly during the earlier months of the year, while in the later months, (except in the month of December in the case of

imports) the general movement was in an upward direction. The improvement, is much more marked in the case of exports than in imports, except in the month of March, 1916.

The decline of Rs. 6.59 lakhs under imports is mainly due to the heavy fall in railway plant and rolling stock, textiles, copper and machinery; a decline which was partly set off by an increase in the value of the imports of sugar from Java. Exports improved by Rs. 15.95 lakhs, chiefly under raw jute, gunny bags and cloth, tea, indigo, hides and skins, and wool, notwithstanding heavy decreases under rice, seeds and raw cotton.

## THE IMPORT TRADE.

The value of the import trade in each of the classes under which articles are grouped in the trade returns is shown in the appended table. The share of Class I (Food, drink and tobacco) was 20.5 per cent. and of Class III (Manufactured articles) 71.2 per cent. of the total import trade, as against 14.2 per cent and 77.3 per cent respectively, in the previous year. It is important to remember that these percentages refer to values and not to quantities. Class I showed an increase in value of over 37 per cent. while Class III a decrease of over 12 per cent. There was no change as compared with 1914-15 in the percentage share of Class II (Raw materials) in the total import trade, but the value

decreased by more than 8 per cent. Under Class I the receipts of sugar were, owing mainly to the rise in price, greater by Rs. 6.09 lakhs. Imported salt accounted for an increase of Rs. 51 lakhs, Rs. 13 lakhs being due to larger quantity and Rs. 38 lakhs on account of higher prices. In Class II noticeable decreases were in coal (—Rs. 54 lakhs), mineral oil (—Rs. 39 lakhs), raw cotton (—Rs. 20 lakhs), raw silk (—Rs. 54 lakhs), and timber (—Rs. 6 lakhs). Precious stones and pearls, unset, was the only important item which showed an improvement, viz., of Rs. 27 lakhs. Under class III very large decreases are recorded under machinery (—Rs. 1,20 lakhs) and metals of every description

(—Rs. 2.59 lakhs). The decline in Railway plant and rolling-stock was no less than Rs 5.86 lakhs or 58 per cent. A reduction of Rs. 5.60 lakhs in the imports of yarn and textile fabrics is noticeable, especially in view of the glut in the piece-goods market referred to in the two previous reports. The receipts of cotton cloth alone accounted for Rs. 5.28 lakhs of the decrease, woollen goods Rs. 77 lakhs, and cotton hosiery Rs. 15 lakhs, but these losses were partly compensated for by increases under silk yarn and piece-goods (+Rs. 73 lakhs) and haber-

dashery and millinery (+Rs. 11 lakhs). Other minor decreases occurred under boots and shoes (—Rs. 17 lakhs), hardware (—Rs. 18 lakhs), and mineral dyes (—Rs. 80 lakhs). The only noticeable increases in this class were under gold and silver thread (+Rs. 19 lakhs), motor cars and motor cycles (+Rs. 27 lakhs), chemicals (+Rs. 48 lakhs), drugs and medicines (+Rs. 20 lakhs), glass and glassware (+Rs. 10 lakhs), paper and stationery (+Rs. 15 lakhs), matches (+Rs. 25 lakhs), tea chests (+Rs. 88 lakhs), and toys and paints (+Rs. 8 lakhs each).

IMPORTS.	1914-15.		1915-16.		Increase + or decrease — as compared with 1914-15.	
	Rs. lakhs.	Relative share per cent.	Rs. lakhs.	Relative share per cent.	Rs. lakhs.	Per cent.
(PRIVATE MERCHANDISE)						
Class I Food, drink and tobacco .. ..	19,58	14.2	26,94	20.5	+ 7,36	+ 37.6
Class II Raw materials ..	9,32	6.8	8,53	6.5	— 79	— 8.5
Class III Manufactured articles .. ..	1,06,67	77.3	93,51	71.2	— 13,16	— 12.3
Class IV Miscellaneous ..	2,36	1.7	2,36	1.8	..	..
<b>TOTAL ..</b>	<b>1,37,93</b>	<b>100</b>	<b>1,31,34</b>	<b>100</b>	<b>— 6,59</b>	<b>— 4.8</b>

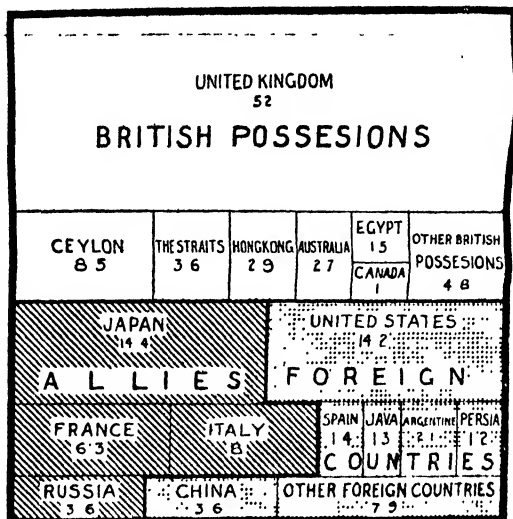
### THE EXPORT TRADE.

The total exports of Indian merchandise showed an increase of nearly Rs. 15.05 lakhs or 8 per cent. The details of the four main groups of this trade are shown in the following table :—

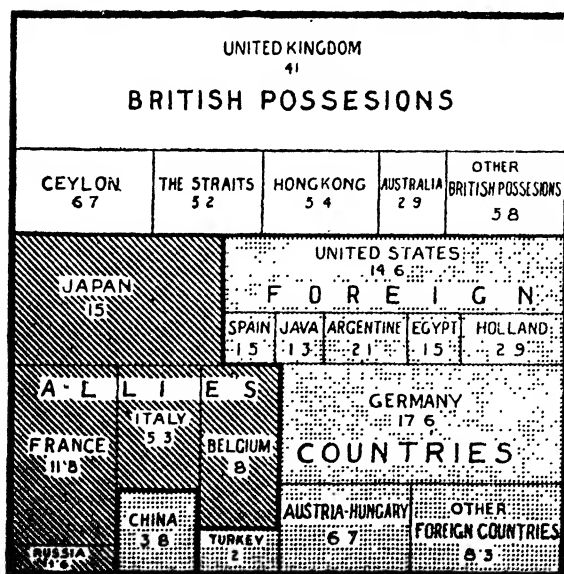
	1914-15.		1915-16.		Increase + or decrease— as compared with 1914-15.	
	Rs. (lakhs.)	Relative share per cent.	Rs. (lakhs.)	Relative share per cent.	Rs. (lakhs.)	Per cent.
Class I Food, drink and tobacco .. ..	48,97	27.6	53,07	27.6	+ 4,10	+ 8.4
Class II Raw materials ..	80,07	45.1	74,12	38.5	— 5,95	— 7.4
Class III Manufactured articles .. ..	46,58	26.3	63,21	32.8	+ 16,63	+ 35.7
Class IV Miscellaneous ..	1,86	1	2,13	1.1	+ 27	+ 14.5
<b>TOTAL ..</b>	<b>1,77,48</b>	<b>100</b>	<b>1,92,53</b>	<b>100</b>	<b>+ 15,05</b>	<b>+ 8.5</b>

Exports 1915-16, £ 187 Millions.

The Distribution of India's Export Trade in 1915-16,  
as compared with the pre-war year 1913-14.



Exports 1913-14, £ 171 Millions.



The figure represents the respective share of each country in million £ sterling.

Since the outbreak of war, the most important change has been with regard to (3), the share of the British Empire has considerably increased, with a corresponding decrease in the share of countries outside the Empire.

Imports 1915-16, £ 95 Millions.

The Distribution of India's Import Trade in 1915-16,  
as compared with the pre-war year 1913-14.

UNITED KINGDOM 56.7			
BRITISH POSSESSIONS			
THE STRAITS 2.5	AUSTRALIA 1.9	MAURITIUS 1.4	OTHER BRITISH POSSESSIONS 3.5
JAPAN ALLIES	JAVA 8.9	FOREIGN COUNTRIES	
FRANCE 1.3	ITALY 1.3	CHINA 3.7	OTHER FOREIGN COUNTRIES 5.5
UNITED STATES 5.3			

Imports 1913-14, £ 147 Millions.

UNITED KINGDOM 9.4			
BRITISH POSSESSIONS			
THE STRAITS 3	AUSTRALIA 2.3	MAURITIUS 1.7	OTHER BRITISH POSSESSIONS 3
JAPAN 3.2	JAVA 7.2	GERMANY 8.4	FOREIGN COUNTRIES
ALLIES	BELEUM	CHINA 1.7	
FRANCE 1.3	ITALY 1.3	AUSTRIA-HUNGARY 2.9	TURKEY 1.1
UNITED STATES 5.3	ECVPI 4.7	HOLLAND 2.1	OTHER FOREIGN COUNTRIES 3.3
C O U N T R I E S			

The figure represents the respective share of each country in million £ sterling.

Since the outbreak of war, the most important change has been with regard to (1), the share of the British Empire has decreased, with a corresponding increase in the share of countries outside the Empire.

The relative position of Classes I (Food, drink and tobacco) and IV (Miscellaneous) remained unchanged, but the share of Classes II (Raw materials) and III (Manufactured articles) was 38 per cent. and 38 per cent. of the total export trade, as against 45 per cent. and 26 per cent. respectively, in the previous year. There has, therefore, been a very considerable increase in the value of exports of manufactured articles. While manufactured imports declined this year from Rs. 106 crores to Rs. 93 crores, exported manufactures rose to Rs. 63 crores from Rs. 46 crores in 1914-15, reducing the net balance of manufactured imports to Rs. 30 crores as against Rs. 60 crores in 1914-15 and Rs. 91 crores in 1913-14. The expansion of trade in class I (food, drink and tobacco) was entirely due to large exports of tea from India which increased by Rs. 4.45 lakhs, partly set off by a decrease of over Rs. 60 lakhs under coffee. Including the amount exported on Government account, the shipments of wheat aggregated Rs. 8.44 lakhs or Rs. 12 lakhs in excess of the total for 1914-15. The quantity, however, decreased from 706,383 tons to 652,879 tons. The exports of barley rose by Rs. 1.49 lakhs, while there was a decrease of over Rs. 1.70 lakhs under rice. Pulse improved by Rs. 44 lakhs and gram by Rs. 10 lakhs. The decline of Rs. 5.95 lakhs in Class II (Raw materials) was made up of heavy decreases under raw cotton (—Rs. 8.56 lakhs) and seeds (—Rs. 4.53 lakhs), which were on the other hand, partly set off by increases under raw hides and skins (+Rs. 1.98 lakhs) raw jute (+Rs. 2.73 lakhs), raw wool (+Rs. 1.42 lakhs) rubber (+Rs. 3 lakhs) and coal (+Rs. 21 lakhs). Of seeds, linseed showed a decline of Rs. 2.28 lakhs, cotton seed Rs. 84 lakhs, sesamum Rs. 82 lakhs, and copra or coconut kernel Rs. 66 lakhs, only groundnut (which is used for the manufacture of margarine) accounting for an increase of Rs. 23 lakhs. The most marked downward

movement noticed was that of raw cotton. Other noticeable decreases were under teakwood (—Rs. 24 lakhs) and bones for manure (—Rs. 13 lakhs). The most remarkable factor in the increase in Class III (Manufactured articles) was in the exports of jute manufactures, (gunny bags (+Rs. 7.56 lakhs) and gunny cloth (+Rs. 4.56 lakhs). The total shipments of indigo were valued at Rs. 2.08 lakhs against Rs. 90 lakhs in 1914-15. Large increases also took place in tanned or dressed hides and skins, amounting to Rs. 87 lakhs, in cotton twist and yarn (+Rs. 64 lakhs) and piecegoods (+Rs. 88 lakhs, and also in saltpetre (+Rs. 26 lakhs). Opium, it may be noted, declined in value by Rs. 29 lakhs.

**Treasure.**—The private imports of gold bullion and coin showed a very large decrease from Rs. 28.23 lakhs in 1913-14 and Rs. 10.70 lakhs in 1914-15 to Rs. 5.24 lakhs only in 1915-16. The imports decreased by more than half, owing to the restriction on the movement of gold. The United Kingdom contributed Rs. 2.87 lakhs, Australia Rs. 1.46 lakhs, and Asiatic Turkey, Aden and China about Rs. 26 lakhs each. The exports on private account amounted to Rs. 6.39 lakhs, as against Rs. 2.25 lakhs in 1914-15 and Rs. 4.90 lakhs in 1913-14. Of the total exports 48 per cent. was in bullion and 52 per cent. in the form of coined gold. Japan received a consignment of Rs. 3.18 lakhs and the United Kingdom of Rs. 3.04 lakhs. Government imports were valued at Rs. 8 lakhs, but there were no exports on Government account. There was thus a total net export of gold amounting to Rs. 1.11 lakhs; only thrice in the previous 40 years has there been a net export of gold from India.

In 1915-16 the net absorption was only £3,000,000 as against £12 millions in 1914-15, and £23 millions in 1913-14. The net absorption during the past forty-three years ending 1915-16 amounted to no less than £232 millions.

### ABSORPTION OF GOLD.

(In thousand of £ sterling.)

	AVERAGE OF 5 YEARS ENDING.							
	1873-74.	1878-79.	1883-84.	1888-89.	1893-94.	1898-99.	1903-04.	1908-09.
1. Net annual addition to the stock of the country..	1,000	600	3,200	2,400	2,000	2,800	6,000	8,400
2. Progressive total of additions to the stock ..	1,000	4,000	12,200	28,000	40,000	48,000	72,400	110,800
3. Held in mints and Government Treasuries and Currency and Gold Standard Reserves ..	..	..	..	..	..	400	8,400	4,400
4. Net annual variation in item 3..	..	..	..	..	..	400	1,800	—2,200
5. Net progressive absorption ..	1,000	4,000	12,200	28,000	40,000	48,200	64,000	108,400
6. Absorption of the year ..	1,000	600	3,200	2,400	2,000	2,400	4,200	10,000



	1900-10.	1910-11.	1911-12.	1912-13.	1913-14.	AV- ER- AGE OF 5 YEARS ENDING 1913- 14.	1914-15.	1915-16.
1. Net annual addition to the stock of the country.	16,000	18,000	27,000	25,000	18,000	20,800	7,000	1,600
2. Progressive total of additions to the stock	144,000	162,000	189,000	214,000	232,000	188,200	239,000	240,600
3. Held in mints and Government Treasuries and Currency and Gold Standard Reserves	6,000	6,000	16,000	20,000	15,000	12,600	10,000	8,000
4. Net annual variation in item 3.	6,000	..	10,000	4,000	-5,000	3,000	-5,000	-2,000
5. Net progressive absorption	138,000	156,000	173,000	194,000	217,000	175,600	229,000	232,600
6. Absorption of the year	10,000	18,000	17,000	21,000	23,000	17,800	12,000	3,600

The imports of Government of India rupees were valued at Rs. 35 lakhs and the exports amounted to Rs. 1.79 lakhs, of which Rs. 80 lakhs were on Government account to meet special demands in the Persian Gulf, in Egypt (where the rupee has temporarily been made legal tender), in East Africa, and in Aden. Exports of rupees also took place to Arabia, the Bahrain Islands, Ceylon and the Straits.

### BALANCE OF TRADE.

The excess of exports over imports of merchandise and treasure in 1915-16 was Rs. 58.25 lakhs, including Government transactions, and Rs. 61.62 lakhs excluding Government transactions.

The corresponding averages of the preceding three years are Rs. 23.48 lakhs and Rs. 34.07 lakhs. The total net exports, in the year under review were, it will be seen, much larger than in previous years. Many factors alluded to in the previous year's Trade Review should be taken into consideration in determining correctly the balance of trade of India, but exact information and accurate statistics in regard to some of those factors are not always available. But those items which are usually taken into account in arriving at India's trade balance are shown in the following table.

	1914-15 Rs. (lakhs.)	1915-16. Rs. (lakhs.)
Imports of merchandise ..	1,37.93	1,31.34
Net imports of gold ..	8.45	-1.15
Net imports of silver ..	10.02	5.57
Net unfaced securities ..	36	90
Interest on unfaced securities ..	34	32
<b>TOTAL IMPORTS</b> ..	<b>1,57.10</b>	<b>1,36.98</b>
Exports ..	1,81.59	1,97.37
Net exports ..	24.49	60.39
Council bills paid in India ..	10.79	31.05
Funds supplied by Government to finance wheat purchases ..	..	4.25
Reverse bills paid in London ..	-13.06	-7.34
<b>Net</b> ..	<b>-2.27</b>	<b>27.06</b>
<b>Balance of trade in favour of India</b> ..	<b>26.76</b>	<b>32.43</b>

Deducting Council Bills and telegraphic transfers sold in London and the funds supplied by Government to finance wheat purchases from the net export of merchandise and treasure and unfaced rupee paper, the balance in favour of India is calculated from 1915-16 at Rs. 32.43 lakhs, as against Rs. 26.76 lakhs in 1914-15. The very large balance in favour of India as compared with last year is of particular interest and importance.

**Government Wheat.**—In order to make the Balance of Trade statement complete so far as wheat transactions during the year are concerned, it is necessary to show on the one hand the exports of wheat on Government account, and on the other the remittance to India of funds to pay for these exports. These exports on Government account, which amounted to Rs. 6.90 lakhs, were paid for in two ways—(1) by money provided by agent firms in India to the extent of Rs. 2.66 lakhs. These firms were subsequently reimbursed by drafts on the Secretary of State or by direct payments by the Secretary of State. (2) The balance amounting to approximately Rs. 4.25 lakhs was paid by funds supplied by the Wheat Commissioner in India. To show these transactions in the statement of Balance of Trade it was considered desirable to show the Government exports of wheat as private exports and the funds supplied by the Wheat Commissioner as an import of funds on the same side of the account as Council bills paid in India are shown.

**Trade and Prices.**—It is important, especially at the present time to eliminate in an analysis of the trade returns the effect of the variation in prices. The method that has been followed is that universally employed for this problem. The calculated values re-

present what the value of the trade would have been, if prices had remained on the same level as in 1914-15, the difference between these calculated values of the trade of 1915-16 and the values recorded in 1914-15 representing the variation due to the change in the volume of trade in the year under review, and the difference between the calculated values and the actual value recorded in 1915-16 representing the variation due to the change in prices. According to the recorded figures, there was an increase in the total turnover, excluding re-exports, of Rs. 8.46 lakhs. The actual volume of trade, however, declined by Rs. 4.13 lakhs, so that price changes accounted for a rise of Rs. 12.59 lakhs. In other words, the volume of trade shrunk by 1.3 per cent., but the average prices were 4 per cent. higher.

The volume of imports fell by Rs. 20.45 lakhs, while the advance in average prices accounted for an increase of Rs. 13.86 lakhs, thus reducing the decrease of Rs. 6.59 lakhs. In short, the average import prices rose by 12 per cent, and the volume of imports decreased by 15 per cent.

The volume of exports rose by Rs. 16.32 lakhs, although the fall in average prices reduced this increase to Rs. 15.05 lakhs. In other words, average export prices fell by .7 per cent, and the volume of exports increased by 9 per cent.

The wholesale prices of country produce in India at the end of the official year under review, compared with the prices prevailing at the end of the year ending March, 1915, showed no great increases, except in regard to raw jute and raw cotton—the two Indian staples which were so seriously affected immediately after the outbreak of war. The average price of wheat in India, which had increased with such rapidity during the months of January and February, 1915, declined after Government Intervention, and the fall continued, with slight fluctuations, till the end of March, 1916, when the average price was actually 5 per cent. lower than the price that ruled before the war, and 21 per cent. below that which prevailed in the corresponding period of the previous year. The average price of rice in March 1916, remained the same as in March 1915, although during the months, September to November, 1915, the price was considerably higher than in the corresponding months of the previous year. The price in March 1916, it may be noted, was 12 per cent. below the pre-war rate. Of the inferior food-grains, the average price of maize declined most, being as much as 25 per cent. below last year's prices, while the average prices of jawar, barley, and bajra declined by 9 per cent., 5 per cent.

and 2 per cent. respectively. Gram fell 18 per cent. and dal (arhar) 7 per cent. below the price that ruled a year ago. Among oilseeds, linseed showed a slight rise of 8 per cent. owing to scarcity of stocks and supplies in the market, and rape and mustard showed no change, but sesamum declined by 5 per cent. It is already stated, it was only in raw jute, owing to the demand for war bags, etc., and raw cotton, owing to good demand on the part of spinners, that prices recorded a marked upward movement. Raw jute rose 25 per cent and raw cotton 89 per cent, as compared with the prices of the corresponding period of the previous year. The prices however of raw jute and raw cotton were still 17 per cent. and 5 per cent. respectively, below the pre-war rates. Among imported articles the rise in the price of Liverpool salt is most noticeable. The wholesale price in Calcutta at the end of March 1916 was Rs. 201 per 100 maunds, as against Rs. 105 at the end of March 1915, and Rs. 51 on the 30th July, 1914. The prices of Java Sugar (T. M. O. white) during the same periods were Rs. 12-6 as., Rs. 11-12 as., and Rs. 6-12 as., per maund respectively. The rise in the price of salt was, therefore 294 per cent. and in that of sugar 83 per cent. over the pre-war rates, and 91 per cent. and 5 per cent. respectively, as compared with prices that ruled at the end of March 1915.

In Calcutta wholesale prices showed a rise of 13 per cent., as against the corresponding date of last year and 18 per cent. as compared with the period just previous to the outbreak of war.

**Wages.**—In 1915-16, as compared with the previous year, there were no fluctuations of importance in the earnings of labour, except in the brewing industry in the Punjab and the tea industry in Assam. Notwithstanding the heavy war orders in the jute and wool industries, there was no great rise in the wages paid, owing to the fact that the mills, especially the jute mills, were on the whole well supplied with labour during the year under review. The wages paid in the paper, mining, and rice industries were similar to those paid in the previous year. In the cotton industry in January, 1916, as compared with the corresponding period of last year, there was also no marked change in the wages, but compared with the pre-war period, the rates showed an increase of 3 per cent., the rise being chiefly in the sizing and weaving departments. Tables 53-55 on pages 100-101 show the wages paid for the last three years. It should be noted that returns refer generally to a representative mill in the chief locality of the industry, since returns are not yet received of wages paid in the various mills of each industry.

## DIRECTION OF TRADE.

The share of the British Empire in the total trade was over 60 per cent. and of foreign countries nearly 40 per cent. in the year under review, being approximately on the same level as in 1914-15. As compared with the pre-war year (1913-14), the share of the British Empire improved by nearly 9 per cent. The share of the United Kingdom was in 1915-16 nearly the same as in the previous year, 46.6 per cent. of the total, or an increase of 6 per cent. over the pre-war year 1913-14.

The most noticeable changes, however, brought about by the war are in the shares of trade with countries outside the Empire, namely, in regard to Continental Europe and to countries in Asia outside the Empire, such as Java and Japan. The share of Continental Europe—and by Continental Europe are meant mainly Germany, Austria-Hungary, Belgium, France, Holland, Italy and Russia—in the aggregate value of imports and exports, including re-exports, fell from 26 per cent. in 1913-14 and 17 per cent.

## Trade Distribution.

in 1914-15 to 11 per cent. In 1915-16, while the trade with countries in Asia outside the British Empire rose gradually from 14 per cent. in 1913-14 and 15 per cent. in 1914-15 to 18 per cent. in 1915-16. The trade with America, chiefly the United States, also showed a steady and important advance from 8 per cent. in 1913-14, and 9 per cent. in 1914-15 to 11 per cent. in 1915-16. The percentage shares of the chief countries in the total import trade (during the last nine years) are shown in the following tables —

	1907-08.	1908-09.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.
<b>BRITISH EMPIRE.</b>									
United Kingdom .. ..	66.7	62.7	62.6	61.1	62.4	6.3	64.1	67.4	59.4
Strait Settlements .. ..	2.2	2.6	2.4	2.4	2.1	1.9	1.9	2.4	2.9
Mauritius .. ..	1.8	2.1	2.2	2.4	1.4	2	1.4	1.2	1.6
Australia .. ..	.6	.9	.8	.9	.8	.6	.5	.6	.5
Other countries of the British Empire .. ..	2.8	2.3	2.4	2.3	2.2	2.2	2.1	2.4	3.8
Total British Empire ..	73.6	70.6	70.4	69.1	68.9	69.7	70	74	67.7
<b>FOREIGN COUNTRIES.</b>									
Germany .. ..	5.0	6	5.5	6.5	6.5	6.4	6.9	3.4	.8
Austria-Hungary .. ..	2	3	2.2	2.2	1.9	2.2	2.3	.9	..
Russia .. ..	.3	.3	.1	.2	.1	.8	.03	.03	.1
Java .. ..	4.5	5.1	6.8	7	6.8	5.9	5.8	5.8	10.2
United States of America ..	2.8	2.7	3.2	2.7	3.8	3.3	2.6	3.5	6
Japan .. ..	1.7	1.8	2.2	2.6	2.5	2.5	2.6	3.3	5.7
Belgium .. ..	1.6	1.9	1.7	1.7	1.7	1.9	2.3	1.2	.2
Italy .. ..	.8	.9	.8	1	.9	1	1.2	1.1	1.5
France .. ..	1.5	1.6	1.6	1.7	1.5	1.3	1.5	1.3	1.5
China .. ..	.9	1.1	1.1	1	1.1	1.3	.9	1.1	1.5
Holland .. ..	.7	.8	.9	.8	.9	.9	.8	.9	.9
Persia .. ..	.3	.4	.4	.5	.4	.4	.4	.5	.5
Turkey Asiatic .. ..	.4	.5	.5	.5	.5	.4	.3	.2	.3
Other foreign countries ..	3	3.4	2.7	2.5	2.5	2.5	2.37	2.67	3.6
Total Foreign countries	26.4	29.4	29.6	30.9	31.1	30.3	30	26	32.3

The decrease in the trade with **Continental Europe** was £13 millions as compared with 1914-15, and £32 millions as compared with 1913-14. Imports declined from £19½ millions in 1913-14 and £9 millions in 1914-15 to £5½ millions in 1915-16, and exports from £56 millions and £28 millions to £18 millions in the same periods. This was, of course, largely due to the cessation of exports to Germany, Austria-Hungary, and Belgium, although there were larger exports to Russia, France, Italy, Spain and Switzerland. There were small increases in the imports from France, Italy, and neutral countries.

France accounted for 3.5 per cent. of the total trade. Imports increased by 13 per cent. owing to larger receipts of motor cars and tyres, gold and silver thread, haberdashery, dyes, silk manufactures and liquors. Exports of Indian produce increased by 6 per cent. on account of larger shipments of jute bags and cloth, groundnuts, raw cow hides, rice, rapeseed and corn. The exports, however, of coffee, raw

cotton, wheat, linseed and pepper fell off considerably.

Italy's share in the total trade improved from 2.6 per cent. in 1914-15 to 3.4 per cent. in 1915-16. Imports increased owing to large imports of motor cars and tyres, machinery, sulphur, cotton tussors and flannelette, silk manufactures, and haberdashery. The exports to Italy of raw hides and skins, raw jute, indigo and groundnut oil increased, while raw cotton, pepper, and seeds decreased.

The trade with Russia increased owing to larger shipments of tea (£1,411,000) and rice (£115,000). Russia supplied tea chests of worth £55,000. Her purchases of jute manufactures were very heavy in the year under review (£1,920,000).

The only exports to Belgium were 21,000 tons of rice exported from Burma valued at £154,000 in May, August and September, 1915, for the Belgian Relief Commission.

**Trade with Neutrals.**—Taking 1913-14, the year before the war for comparison, 1915-16 shows considerable increases in the exports to Sweden of raw cotton, raw hides, and raw jute, and to Norway of raw hides, raw cotton, and especially linseed. The trade of Norway has increased nearly four fold. There was a large increase in wheat exports to Holland (all of which were on Government account) from 960 tons, valued at £8,500 in 1913-14 to 5,644 tons, valued at £47,000 in 1915-16. Other articles of exports to Holland have been prohibited or curtailed, the total trade falling from £2,941,800 in 1913-14 to £144,800 in 1915-16. Exports to Denmark in 1915-16 consisted principally of linseed (£25,000), and the total exports fell considerably. The exports of raw jute to Spain as compared with the pre-war year (1913-14) increased.

**Japan.**—Represented nearly 8 per cent. of the total trade against 6·3 per cent. in 1914-15. Imports into India increased by 69 per cent. and exports to Japan by nearly 18 per cent.

Silk manufactures, cotton piecegoods, matches, sugar, beer, toys, machinery and millwork, tyres, and tubes and cement chiefly accounted for the increase in imports, while raw cotton and iron and steel (pig iron) were mainly responsible for the increase in exports.

Under imports, however, the increase was not large when compared with the total imports that formerly came from Continental countries with which India's commercial relations have naturally been cut off owing to the war. It may be noted that the Japanese cotton industry is dependent on India for its raw material and on China as its chief market for the manufactured goods. Among the most recent imports from Japan is beer, amounting to 253,505 gallons valued at £29,000 against 64,000 gallons, valued at £7,000 in 1914-15. It may be of interest to note here that the major portion of the trade in beer had previously been with the United Kingdom which supplied 86 per cent. of the total imports in 1915-16 as against 90 per cent. in 1914-15 and 86 per cent. in 1913-14. Japan is also competing with the United Kingdom in India for the supply of glass and glassware, which were valued at £400,000 against £131,600 in 1914-15 and £105,000 in 1913-14. The im-

ports prior to the war (1913-14) were 8 per cent. from Japan and 41 per cent. from the United Kingdom but the present percentages are 83 and 43 respectively. The trade in matches has also advanced from £260,000 in 1913-14 and £461,000 in 1914-15 to £705,000 in 1915-16. The imports of cotton hosiery declined from £550,000 in 1913-14 and £444,000 in 1914-15 to £370,000 in 1915-16.

The position of **Java** has been of increasing importance in connexion with her sugar trade. Imports of sugar were valued at £8,845,000, as against £5,341,000 in 1914-15, £7,096,000 in 1913-14, and £6,294,000 in 1912-13. There were no appreciable changes in the exports of gunny bags, opium and rice.

The trade with the **United States** has made considerable strides, as in the case of Japan, in the way of replacing articles hitherto obtained from Continental countries with which India's trade relations have ceased owing to the war. The total trade is nearly 9 per cent. of India's foreign trade, as against 6·9 per cent. in the previous year. Imports increased by 68 per cent. and exports by 22 per cent. over the year 1914-15, while imports increased by 64 per cent. and exports decreased by 3 per cent. as compared with 1913-14. Iron and steel (sheets and steel bars), cotton piecegoods, (Pepperell drills), hardware and cutlery instruments and apparatus, lubricating oil, and motor cars, contributed to the increase under imports, and raw jute, gunny cloth, raw hides and skins, indigo, lac, vegetable oil, tea and pepper under exports. The two directions in which the United States have been making most rapid progress as far as imports are concerned, are the iron and steel trade and motor cars and vehicles.

As regards the former the United States of America have taken the place of Germany and Belgium and accounted for 26 per cent. of the total import trade, the value being £1,000,000 against £308,000 in 1914-15. In the case of motor cars the number increased from 510 cars with an average value of Rs. 2,192 per car in 1914-15 to 2,136 cars with an average value of Rs. 2,441.

**Trade by Provinces.**—The share of each maritime province in the total sea-borne trade in private merchandise during the last two years is shown in the table below.

—	1914-15.				1915-16.			
	Import. £(1,000)	Export £(1,000)	Total £(1,000)	Share per cent	Import. £(1,000)	Export £(1,000)	Total £(1,000)	Share per cent.
Bengal .. ..	38,109	49,647	87,756	41.2	34,856	61,083	95,939	43.
Bihar and Orissa ..	..	34	34	..	..	..	..	..
Bombay .. ..	30,735	32,743	63,478	29.8	29,495	31,598	61,093	27.9
Madras .. ..	8,349	14,408	22,757	10.7	7,688	16,388	24,076	11
And .. ..	7,729	13,387	21,116	9.9	8,344	12,548	20,892	9.5
Burma .. ..	7,031	10,842	17,873	8.4	7,177	9,970	17,147	7.8
<b>TOTAL ..</b>	<b>91,953</b>	<b>121,061</b>	<b>213,014</b>	<b>100</b>	<b>87,560</b>	<b>131,587</b>	<b>219,147</b>	<b>100</b>

(1) The import trade in the case of Bengal, Bombay and Madras declined as compared with the previous year, while the import trade of Sind and Burma increased. (2) The export trade in the case of Bengal and Madras increased, while the decreased in the case of Bombay, Sind and Burma. (3) The total trade, imports and exports taken together, increased in the case of Bengal and Madras, while it decreased in the case of Bombay, Sind and Burma. (4)

Bengal had a larger trade than Bombay, share was 43·8 per cent. while that of Bombay was 27·9 per cent. The share of Madras and Sind was practically the same, as in the previous year—11 per cent. and 9·5 per cent. respectively. The share of Burma was 7·8 per cent. Bengal does most of the trade with Europe, America and Australia while Bombay does the greater part of the trade with Asiatic ports and Africa.

## FRONTIER TRADE.

Frontier trade is carried on with adjoining foreign countries across a land frontier of approximately 6,800 miles. The value is comparatively small, being in 1915-16 about 6 per cent. of the total sea-borne trade. The effect of the war is noticeable in the heavy imports of raw wool from Afghanistan which was chiefly re-exported to the United Kingdom and the United States of America. There was also a heavy decline in the trade with Persia for want of transport at Nushki. The Political Agent, Chaghalais of opinion that the war has afforded an opportunity of capturing large trade with the north-east of Persia and the west of Afghanistan.

	1913-14.			1914-15.			1915-16.		
	Ex-ports Rs. (lakhs)	Im-ports Rs. (lakhs)	Total Rs. (lakhs)	Ex-ports Rs. (lakhs)	Im-ports Rs. (lakhs)	Total Rs. (lakhs)	Ex-ports Rs. (lakhs)	Im-ports Rs. (lakhs)	Total Rs. (lakhs)
N. W. Frontier—									
Afghanistan .. ..	152	1,29	2,81	1,36	1,21	2,57	1,53	1,67	3,20
Dir, Swat, and Bajaur	87	78	1,65	90	75	1,65	86	58	1,44
Central Asia .. ..	18	12	30	15	9	24	13	11	24
Persia .. .. .	22	3	25	16	8	24	9	3	12
N. and N. E Frontier—									
Nepal .. .. .	2,05	4,33	6,38	1,91	3,85	5,76	2,07	3,95	6,02
Tibet .. .. .	20	33	53	18	35	53	19	38	57
Sikkim .. .. .	10	31	47	10	29	45	16	27	43
Bhutan .. .. .	18	21	39	18	22	40	11	10	27
Eastern Frontier—									
Shan States .. ..	1,83	2,02	3,85	2,18	1,93	4,11	2,28	2,08	4,36
Western China .. ..	50	29	85	53	19	72	43	19	62
Siam .. .. .	17	44	61	17	43	60	16	26	42
Karenne (North Tenasserim) .. .. .	6	35	41	3	24	27	2	20	22

The principal imports across the land frontier of India are rice, oilseeds, provisions, (chiefly in the form of ghi and pickled) tea, cattle, sheep and goats, which are imported largely from Nepal; horses, ponies, and mules, chiefly from the Shan States; teak from Siam and Karenne in the eastern frontier of Burma; other timber from the north-west frontier (Ferah, Dir, Swat, and Bajaur and Waziristan); raw wool, mainly from Afghanistan, and Tibet; and fruits and vegetables, chiefly from Afghanistan. The principal exports from India are cotton manufac-

tures and yarn, mostly of foreign origin; and other exports, among which spices, metal sugar, tea, and salt are the most important, and on a much smaller scale.

**Inland Trade.**—The imports and exports are each 32,530,000 tons, valued at Rs. 403 crores (£269 millions), as against 31,673,000 tons valued at Rs. 393 crores (£262 millions) in the previous year (1914-15) and 33,751,000 tons valued at Rs. 447 crores (£296 millions), 1913-14.

## COMMERCIAL INTELLIGENCE SYSTEM.

The Commercial Intelligence Department, India, was founded in 1905 under the control of a Director General of Commercial Intelligence. Its primary object was the supply to the public of such information as would stimulate Indian trade development. Since April, 1914, the compilation and issue of official statistics of India have been carried out by the Department of Statistics, India, under the control of a Director of Statistics.

As now constituted the Department serves the purpose of a Central Bureau at which information on subjects of commercial interest is collected and disseminated to the public, and from which replies are posted to enquiries by business men on commercial matters. It is situated at 1, Council House Street, Calcutta, the headquarters of the Director-General. The information collected by the Department and intended for general publication is printed in its weekly official organ, the "Indian Trade Journal." The principal features of the "Journal" are (a) information as to Tariff Changes in the United Kingdom and elsewhere which affect Indian interests, (b) Summaries of the leading features of consular and other trade reports, (c) Abstracts of the proceedings of the various Chambers of Commerce in India, (d) Abstracts of crop reports and forecasts, (e) Government orders, *communiqués* and other notices affecting trade, and (f) anonymous enquiries for securing trade introductions. It also contains analyses of Indian trade statistics.

A Commercial Museum has been permanently organised as a part of the Commercial Intelligence Department with the object of bringing together purchasers and suppliers of Indian manufactures. It thus supplements the existing resources of the Department as a bureau of information, and stimulates the development of the natural resources of the country. The Museum contains samples of such goods of Indian manufacture as have been received for exhibi-

tion together with information as to prices and the names of the manufacturers and commercial agents. The exhibits have been carefully grouped and catalogued. Order books are available in which orders may be registered direct with the manufacturers or their respective commercial agents. An Enquiry Office is attached to the Museum, which is also located at 1, Council House Street, Calcutta, and is open on week days from 10-30 a.m. to 5-30 p.m. and on Saturdays from 10-30 a.m. to 2-30 p.m. Admission Free.

**Department of Statistics.**—This was originally created in 1895 and in 1914 was re-created and re-organised. It is officially under the Department of Commerce and Industry but compiles and publishes reports and returns under the orders of other executive departments.

It is divided into two main divisions, each under a Superintendent. The first division consists of six sections and the second division of four sections.

Section I, the Registry Section, deals with the receipt and issue of letters, pay, pensions, distributions of publications, record and library; Section II deals with Prices, Rate Lists and Freight; Section III with Wage Statistics; Section IV, Judicial, Administrative, Educational and Vital Statistics; Section V Rail and River Borne Trade; Section VI, Statistics relating to the Inland and Frontier trade of Bengal; Section VII, perhaps the most important section in the whole Department, the Sea-borne Trade section, which compiles the All India Sea-borne Trade Returns including Coasting Trade, Treasure, Shipping, and Customs duties; Section VIII deals with Frontier Trade; Section IX with the Agricultural Returns, Crop Forecasts, Cotton Press Returns, etc.; Section X deals with Commercial and Financial Statistics.

**Director of Statistics.**—G. Findlay Shirras, 1, Council Street, Calcutta.

## INDIAN FISCAL POLICY.

The fiscal system of India may be described as one of free trade, with a moderate tariff for revenue purposes. The various steps which led to the imposition of the present tariff are detailed under the head Customs (qv); the tariff is a general one of seven and a half per cent. (10 per cent. on sugar) with a small free list and export duties on tea, jute and rice from Burma. To the general tariff there is an important exception. Cotton manufactured goods of which the bulk come from the United Kingdom, pay only three and a half per cent.; and in order to prevent even this small tariff from exercising the slightest protective influence, a countervailing excise of three and a half per cent. is levied on all the cotton goods woven in the Indian mills. The pros and cons of this impost are considered in the article on the Indian Cotton Duties Act (qv).

For long the general volume of Indian educated opinion was in favour of a free trade policy, though the cotton excise duties were cordially detested. But with the growth of an appreciation of the immense importance of developing Indian industries there has been a considerable reaction. This was intensified by the increasing competition of the Continent of Europe in certain classes of manufactured articles, like low-grade textiles, matches and glassware, and later of the rise of Japan as an exporter of manufactured goods to India. If a plebiscite were taken, it is doubtful if a single out and out free trader would be found amongst Indians. The feeling of the unofficial community will be found reflected in the debates in the Imperial Legislative Council, of which a full summary is given in the Work of the Legislative Councils (qv).

## INDIA AND FREE TRADE.

**Movement towards protection.**—The movement towards protection received a great stimulus during the war. The closure of the continental markets and the restricted exports from the United Kingdom would, in ordinary circumstances, have given a great stimulus to Indian enterprise. As will be seen from the sections dealing with these specific subjects, this reacted favourably on the established industries, like cotton manufactures and jute; also on all branches of raw produce. But in many directions India was unable to profit by the opportunity because the industries had not been founded and it was impossible to obtain the necessary plant during the war. The place of the continental countries was taken to a material extent by Japan. Then in the Budget of 1916 the general tariff was raised from five to seven and a half per cent., whilst the import duty on piece goods and the excise were untouched. This aroused strong protest in the Imperial Legislative Council, which will be found reflected in the debates. The Government of India would have liked to raise the import duties leaving the excise untouched, but were overruled by the British Cabinet. In closing the Budget discussion, and in the farewell speech to India delivered on the same occasion the Viceroy made an important statement of policy. In the course of this he said:—

“Sir William Meyer has explained the attitude of His Majesty's Government towards the proposal made by the Government of India that, in the new taxation proposed in this Budget, the import duty on cotton should be raised, leaving the excise duty on cotton at its present rate, an assurance being given by His Majesty's Government of the future **abolition of the excise duty** as soon as the financial situation would permit of such a course. He has also explained that His Majesty's Government feel that the raising of this question at the present time would be unfortunate, since it would provoke the revival of old controversies at a moment when it is specially desired to avoid all contentious questions both in England and in India and that it might prejudice the ultimate settlement of larger issues raised by the war. I need hardly say that the Government of India have no desire to create controversy here, in England or anywhere else at the present time, by the discussion of questions affecting Indian interests but they are glad to have had the opportunity of placing on official record their views that the import duties on cotton fabrics should be raised, and that the excise duty should for the present remain at its actual figure, and an assurance

given that it would be abolished as soon as financial considerations will permit.

“But His Majesty's Government, in expressing their desire that a conflict should not be raised at the present time over the cotton duties, have made a definite declaration which has already been quoted by the Finance Member in his speech introducing the Financial Statement, but which I now repeat as I regard it as of very great importance to India. It is as follows:—

‘His Majesty's Government feel that the fiscal relationship of all parts of the Empire and the rest of the world must be reconsidered after the war, and they desire to leave the questions raised by the cotton duties to be considered at the same time in connection with the general fiscal policy of the Empire and with the share military and financial, taken by India in the struggle. His Majesty's Government are aware of the great interest taken in this question in India and of the impossibility of avoiding all allusion to it when new taxation has to be raised, but they are confident that their decision is in the best interests of India, and that premature discussion of this particular issue could only be harmful.’

“Now I wish to be very careful in not reading into this declaration an interpretation that would not be justified, but I think that I am fully justified in saying that it contains an assurance that the fiscal relations of **India in the Empire** towards the Empire and towards the rest of the world will be reconsidered after the war in connection with the general fiscal policy of the Empire and that the best interests of India are being taken into account in postponing a decision about cotton duties which, after all, form only a small fraction of the fiscal system built up in India. We are all unanimous, I think, as to what the best interests of India in connection with the cotton duties may be, and I regard this declaration that I and my Government have been authorised to make in the name of His Majesty's Government as a far-reaching pronouncement of statesmanship and full of hope and promise, implying as it does the possibility or, I may even say, the probability of a broad reconsideration of the fiscal interests of India from a new ‘angle of vision’ It seems to me to mark a new departure, that it places the future position of India much higher than would have been done by the simple acceptance of the proposals of the Government of India, and I think that the Government and people of India may, with this declaration before them, await the future with patience and confidence.”

## INDIAN TARIFF POSSIBILITIES.

Mr. M. de P. Webb, C.I.E., setting out the possibilities of a scientific tariff, writes:—

The expediency of subordinating every social, economic, political and imperial consideration to the attainment of cheapness in consumption

as never been recognised or admitted by Indian thinkers. For this reason, the abolition of the general five per cent. import duties in 1882 in obedience to the demands of English Free Traders aroused no enthusiasm in India. Nor did their re-imposition in 1894 (when the Govern.

ment of India, owing to financial stress, were compelled to seek additional revenues, lead to any general protest on the part of Indian consumers or others. The 1894 Customs Tariff is still in operation. Its general design and modifications foreshadow a departure from the rigid formulæ of the extreme Free Trader. Thus, although the reduction of the general 5 per cent. duty to  $3\frac{1}{2}$  per cent. in the case of cotton piece-goods and certain other manufactured cotton goods, and the imposition of a  $3\frac{1}{2}$  per cent. Excise Duty on the products of the Indian Cotton Mills, reveal a deplorable sacrifice of Indian interests to the demands of the cotton manufacturers of the English Midlands, the lower rate of duty of one per cent. on many iron manufactures, and the admission of Railway material, power machinery, printing presses and ink, coal, manure, works of art, lead sheets for tea chests, and other special articles *free of duty* indicates a desire on the part of Government to utilise the tariff for the encouragement of certain kinds of economic development in India. This move in the direction of a scientific tariff is one that is heartily welcomed in India.

A further step towards a Tariff appropriate alike for Indian and Imperial requirements was taken in March, 1913, when the Hon. Sir Gangadhar Chitnavis, Member for the Central Provinces, moved the following Resolution in the Imperial Legislative Council:—

‘That this Council recommends to the Governor General in Council the desirability, in view of the loss of the opium revenue, of considering financial measures for strengthening the resources of the Government, with special reference to the possibility of increasing the revenue under a system of Preferential Tariffs with the United Kingdom and the Colonies.’

The mover argued that the benefits to India that would arise from the adoption of the principle here indicated, would be well worth the price that India might have to pay therefor. Sir Guy Fleetwood Wilson on behalf of the Government of India, sympathetically reviewed the general situation at some length, but suggested “further consideration of the intricate and delicate issues” before committing the Imperial Council to the recommendation embodied in Sir Gangadhar Chitnavis’ Resolution. The Resolution was accordingly withdrawn. Sir Guy Fleetwood Wilson’s very able speech will repay careful study.

#### Tariff Reform League’s Views.

Some idea of the direction in which a scheme of inter-Imperial Preferential Trade would tend, so far as India is concerned, may be gathered from the following extract from the official Handbook of the Tariff Reform League:—

“Preference would mean to India that the United Kingdom and the Colonies would give freer entry to Indian tea, coffee, sugar, wheat, and all Indian staple products; and it would mean to us that the Indian import duty on a large number of British manufactures would be either abolished or reduced.”

The fact that India produces more wheat than any other part of the Empire, and more tea, coffee, sugar, cotton, jute, indigo and other

dye stuffs, oil-seeds, undressed leather and cordage than all the rest of the Empire put together, makes India’s position in any Imperial scheme of Preferential Trade one of paramount importance to all who aim at the progressive development of the Empire’s Tariff System.

#### Industrial Expansion needed.

One of India’s important needs and legitimate ambitions at the present day is industrial expansion (1) to relieve her congested agricultural industries, (2) to provide further occupations for those located in districts liable to rain failure, and (3) to create a variety and multiplicity of swadeshi commercial undertakings and home markets suitable and profitable for Indians of all tastes, capacities, and races. These needs and ambitions can be met by modifications of the Indian Customs Tariff which, whilst not adversely affecting British interests, would materially assist India’s foreign and internal trade. Thus, the manufacture in India of sugar, shawls, cotton, goods of low qualities, steel, metal work, enamelled ware, carpets, lace, pottery, indigo, glassware, oils vegetable and mineral, toys, perfumes, pencils, lamps, etc., none of which are supplied in large quantities by the United Kingdom, could be encouraged by a scientific adjustment of the Indian Tariff. With regard to Indian exports, Great Britain could give encouragement to India’s wheat, jute, indigo, tea, coffee, tobacco, etc., whilst Foreign nations could be approached with confidence if India possessed retaliatory powers with regard to her tariff. Russia’s preference for Chinese tea, for example, might be modified if India’s regard for Russian petroleum were restricted. So, too, Germany’s discrimination with regard to manufactured jute, cleaned rice, etc., might be met by an Indian discrimination with regard to German manufactures. The United States and France might be similarly considered; and all without the slightest risk to Indian or British commercial interests.

#### Protection must come.

These considerations bring us to the conclusion that India has much to gain economically and politically, and little or nothing to lose by proceeding a step further in the development of her Tariff. As the late Sir Edward Law pointed out, “it is the natural desire of the great protectionist countries of the world to keep the peoples of India in the position of hewers of wood and drawers of water for their (*i. e.* foreign nations’) manufacturers. Ought such a situation to be tolerated when we hold the remedy in our own hands? Can we expect the people of India to accept it with equanimity?” Obviously, not. It is sometimes thought by rigid free traders in the United Kingdom that England can continue indefinitely to impose her free-imports policy on India. This is a grave misapprehension. Sooner or later, probably sooner, India’s tariff will have to be modified in accordance with the views of India’s industrial and political leaders. Those views unanimously favour protection for India’s young but growing industries, protection against all competition if possible, but in any case, protection against the competition of those foreign countries who handicap or exclude the importation of India’s manufactured products.



## INDIAN COTTON DUTIES ACT.

The origin of this fiscal measure dates back to 1894 when the embarrassment caused to the finances of India by the fall in exchange drove the Government of India to the necessity of adopting measures to increase their sources of revenue. Among these measures was the re-imposition of the Customs Tariff which had been in force prior to 1882 subject, however, to this difference that cotton yarns and fabrics, which had formerly been subjected to an import duty, were in 1894, excluded from the list of dutiable articles. This partial re-imposition of import duties had been recommended by the Herschell Commission which, in reporting in 1893 on the currency question, had favoured this method of adding to the revenue as being the least likely to excite opposition. In point of fact, however, this recommendation which was carried into effect in the Indian Tariff Act of March 1894 gave rise to very marked opposition. In support of their policy the Government appealed to the Resolutions passed in 1877 and reaffirmed in 1879 by the House of Commons, the first of which had condemned the levy of import duties on cotton fabrics imported into India as "being contrary to sound commercial policy," while the latter called upon the Government of India to effect "the complete abolition of these duties as being unjust alike to the Indian consumer and to the English producer." It was, however, an open secret that the decision to exclude from the list of dutiable articles cotton yarns and fabrics was not the decision of the Government of India but that of the Secretary of State. It was pertinently pointed out that the volume of trade in cotton goods and yarns then represented nearly one-half of the total imports from abroad, and that the exemption of these important commodities single other important commodities when practically every single other commodity was being subjected to an import duty could not be justified on its merits as a sound fiscal measure, much less when it was an admitted fact that the Budget would still show a deficit.

**Excise Duties Imposed.**—The opposition to this measure, though it failed to secure its rejection in the Legislative Council, was strong enough to induce the Secretary of State to reconsider the matter. Yielding to the united representations of the Government of India and of Indian public opinion, His Majesty's Government eventually agreed to the re-imposition of import duties on cotton yarns and fabrics provided that it could be shown that such a measure was necessitated by the position of Indian finances, and that it was combined with an Excise duty which would deprive the import tax of any protective character. Accordingly in December 1894, consequent on the further deterioration in the financial position, two bills were introduced in the Legislative Council. The first of these subjected cotton yarns and fabrics to the general import duty of 5 per cent. ad valorem. The second imposed an Excise duty on all cotton yarns of 20's and above produced by Mills in British India. In introducing this latter Bill the then Finance Minister, Sir James Westland, was careful to explain that the policy underlying its provisions had

been imposed on the Government of India by the Secretary of State in pursuance of the Resolution of the House of Commons quoted above. The provisions of this particular Bill are of little interest. From the first it was recognised that they were unpractical. Lancashire and Indian spinners disagreed as to the point at which the line should be drawn exempting Indian yarns from the Excise Duty. Practical difficulties were pointed out by Indian spinners as to the impossibility of spinning precisely to a particular count. From the Lancashire point of view it was contended that the Bill offered facilities for evasion while it was admitted that under the system adopted in the Bill, the taxation of Indian and Lancashire products was not being carried out on a similar basis.

**Act of 1896.**—The Act was in fact doomed to be short-lived, and in December 1895 the Government of India were compelled to reconsider the whole position and to introduce an entirely new measure which became law in January 1896 as the Indian Cotton Duties Act II of 1896. This measure proceeded from two conclusions, namely, that no attempt should be made to obtain any duty from yarns whether imported or locally manufactured, and that an equal rate of duty should be applied to all woven goods whether imported or of Indian origin. With the object of conciliating the opposition, the rate of duty was fixed at 3½ per cent. as opposed to the general rate of Customs duty of 5 per cent. The main provisions of the Act provided that the assessment for the purposes of collecting the Excise duty should be based on returns submitted by the mill-owners; and that provision should be made for a rebate in the case of woven goods exported out of India. No control beyond a requirement that statistical returns should be furnished was attempted in respect of spinning mills. On the other hand certain concessions in the matter of import duty on Mill stores were made by executive order so as to place Indian Mills on a footing more or less equal to their Lancashire competitors.

**Criticisms of the Measure.**—It is not possible within the limits of the present article to do more than summarise the criticisms with which this measure was received in India. Much of the opposition was based on grounds of a transient character; as for instance that the Indian industry was then in a state of continued depression and that it had been hard hit, particularly in respect of its export trade, by the currency legislation, and by the uncertainty as to the fiscal policy of Government. In some quarters objection was offered to the exemption of yarn, which it was alleged, would place the Indian hand weaving industry at an advantage with the Indian power weaving industry. But the hostility to this measure, as also to the earlier measures already described, clearly proceeded from the feeling that the policy of the Government of India and of the Secretary of State had been dictated by Lancashire, and that the action of Lancashire was due not so much to the fact that there was any real competition between Indian and Manchester goods, but to a desire to handicap the Indian industry

whose progress was already causing uneasiness to Lancashire interests. It was argued that the imports from Lancashire were practically all of the higher counts, which, for climatic and other reasons, Indian mills could not produce; that in any case the advantage to the Indian millowner of the import duty was inconsiderable and was counterbalanced by certain drawbacks, arising from the inferiority of Indian labour, which could not be overcome; and that this advantage, such as it was, could scarcely be said to have a protective character, in view of the higher cost of initial equipment in the case of an Indian mill which has to import its machinery, and of working expenses consequent on the scarcity of skilled labour and on the necessity of importing stores required in the production of cloth. Finally, from the standpoint of the consumer, very severe criticism was directed against the reduction, in favour of imported cotton goods, of the general rate of duty from 5 per cent. to  $3\frac{1}{4}$  per cent. on the ground that the effect of the legislation would relieve the richer classes who were consumers of the finer Manchester fabrics and impose new taxation on the poorer classes whose requirements were met by the Indian mills.

**New Factors in the Situation.**—Since the passing of this measure into law the policy of the Government of India in this respect has frequently been the subject of attack in the press and in the Legislative Councils while it has also formed the subject of continued representations by the industrial interests affected and political organizations. In more recent years the agitation in favour of the abolition of the Excise duties has been revived by the growth in England of a strong body of public opinion in opposition to the policy of Free Trade. Advantage has been taken of this new phase in English economic thought to press on behalf of India the acceptance of a policy of Protection and the removal of the Excise duties is now claimed by the opponents to this measure as a necessary corollary of the application to the British Empire of the principles associated with the name of Mr. Chamberlain. A new factor in the situation which has strengthened the position of those who are in opposition to the Excise duties is to be found in the severe competition which Indian mills have to face in China as well as in India from the Japanese industry. The Japanese market was lost to India in the early years of this century. More recently, however, Japan has entered as a competitor with India into the China market, while within the last few years it has pushed its advantage as against the Indian millowner in the Indian market itself. Again it is claimed that the recent enhancement of the silver duty has materially affected the position of the Indian spinner who relied on the China market. On two occasions within the last five years the question of Excise duties

has come prominently to the front as a result of debates in the Viceroy's Council. The official attitude is firmly based on the position that the Excise duties stand and fall with the import duties. Against such an attitude all arguments based either on the advantages of a Protectionist as opposed to a Free Trade policy or on the handicap to which the present system exposes the Indian millowner can, of course, make no head way. The Government of India are confronted with a heavy recurring loss in their revenues as a result of the abolition of the opium traffic. The import duties on cotton piece-goods represent nearly fifteen per cent. of the total revenue collected as Customs duty while the Excise duty itself realised no less than 47 lakhs in 1912-18. The strength of the arguments which support the Government position is so patent that the movement in favour of the total abolition of the Excise duty is gradually giving way to a feeling that a solution may be found in maintaining the Excise duty at its present rate while enhancing the import duties to the level of the general rate of Customs duty. This policy, which is frankly of a protective character, can to some slight extent be supported by the change in the position of Lancashire in respect of the imports of cotton piece-goods. In 1894 when the duties were first imposed the share of Lancashire was no less than 98 per cent. of the total import trade in piece-goods. Foreign competition, notably from Japan, has reduced its share to 91 per cent. and it may be expected that the success of this attack on the position of Lancashire will in the near future loom largely in the arguments of those who favour a modified form of protection within the Empire.

**Statistics of the Industry.**—The main statistical features of the industry may briefly be referred to in illustration of the effects of the legislation discussed above. The total production of yarn in Indian mills has risen from an average in 1896-1900 of 443 million lbs. to 722,000,000 lbs. of which 180,000,000 were exported. In the lower counts the increase has been from 423 to 660,000,000 lbs., counts above 25 having increased from 20,000,000 yds. to 61,000,000 lbs. On the other hand, the imports of yarn from the United Kingdom amount to 40,000,000 of which 30,000,000 are of counts above 25. The number of spindles has increased from  $3\frac{1}{2}$  millions in 1894-95 to 6,646,764 millions in 1915-16.

The development of weaving has been even more marked. Looms numbered, in 1915-16, 108,083 as against 31,628 in 1894-95 while the production of cloth which averaged just under 92,000,000 yds. in 1896-97 has advanced to 1,442,000,000. Grey goods represent 54 per cent. of this total. The Excise duty which was estimated on the introduction of the Act of 1896 to yield 14 lakhs, yielded in 1915-16, 51½ lakhs.

## Banking.

Of the three Presidency Banks the Bank of Bengal which commenced business in the year 1806 is by far the oldest. It was followed by the Bank of Bombay in 1840 and by the Bank of Madras in 1843, but the former was wound up in the year 1867 and the present Bank dates from the year 1868.

To commence with and for some considerable time thereafter Government had a very large interest in all three Banks, holding as they did a large proportion of the share capital and having the right to nominate a number of the Directors. It was decided however in 1876 that this connection should cease and Government holding of shares was accordingly realised in that year and the right to be represented on the Directorates was given up at the same time. Government are still entitled, however, to audit the Banks' accounts at any time if they deem this necessary, to call for any information touching the affairs of the Banks and the production of any documents relative thereto, and may also require the publication of such statements of assets and liabilities at such intervals and in such form and manner as may be thought fit. The Banks' Agreements with Government are usually arranged for a period of ten years at a time and now-a-days provide for the most part for the carrying on at the head offices and branches of the ordinary banking business of Government in India and for the management and conduct in the three Presidency towns of the Government loans. The management of the Government Savings Bank was at one time entrusted to the Bank, but this was handed over to the Post Office in the year 1896.

### Paper Currency.

The Banks had the right to issue currency notes until the year 1862; but in that year this privilege was withdrawn and to compensate the Banks for being deprived of this right, Government decided to deposit the whole of their balances at the Presidency towns with the Banks. This practice held good until the year 1876, when the Reserve Treasuries were formed; but since that year Government balances, which are all payable at call, have only been maintained at a figure sufficient to meet the demands of Government and sufficient also to compensate the Banks in part for the work of keeping the accounts. There are signs however that Government intend to adopt a more liberal policy in future in regard to the balances they maintain with the Presidency Banks. There is no definite undertaking on the part of Government to keep any balance with the Banks either at the head offices or branches; but there is a stipulation that in the event of the balance at the head office of each Bank falling below a certain stated figure, which varies in the case of each Bank, Government will pay interest on the deficit.

In order to assist Government in their attempts to encourage the use of currency notes throughout India the Banks have recently undertaken to issue and encash on behalf of Government universal Currency notes for the public freely at most of their Branches and in consideration of their having undertaken this

work Government have, it is understood, agreed to maintain certain minimum balances, at such Branches so long as they are entrusted with this work.

### Government Deposits.

The following statement shows the Government deposits with each Bank at various periods during the last 40 years or so.

*In Lakhs of rupees.*

—	Bank of Bengal.	Bank of Bombay.	Bank of Madras.	Total.
30 June 1876 ..	409	195	115	719
1881 ..	230	61	53	344
1886 ..	329	82	39	450
1891 ..	332	97	53	482
1896 ..	225	88	57	370
1901 ..	187	90	63	340
1906 ..	186	93	46	325
1911 ..	198	129	77	404
1912 ..	210	155	75	440
1913 ..	247	167	68	482
1914 ..	290	197	93	580
1915 ..	263	187	102	552
1916 ..	336	263	115	714

### General Banking Business.

This is regulated by the Presidency Banks Act, 1870, under which Act all three Banks are now working. The various descriptions of business which the Banks may transact are clearly laid down in Sec. 36 of the Act, and it is expressly provided in Sec. 37 that the Banks shall not transact any kind of banking business other than those sanctioned in Sec. 36. Briefly stated the main classes of business which the Banks may engage in are as follows:—

- (1) Investing of money in any securities of the Government of India or of the United Kingdom of Great Britain and Ireland, the stock or debentures of, or shares in Railways bearing a Government guarantee in respect of interest and the debentures and securities of any Municipal body or Port Trust in India or of the Bombay Improvement Trust and the altering, converting and transposing of such investments.
- (2) Advancing of money against any of the securities specified above or against bullion or other goods which or the documents of title to which are deposited with or assigned to the Bank as security.
- (3) Advancing of money against accepted bills of Exchange and promissory notes.
- (4) Drawing, discounting, buying and selling of bills of exchange and other negotiable securities payable in India or Ceylon.
- (5) Receiving deposits.
- (6) Receiving securities for safe custody and realisation of interest, &c., from constituents of the Bank.
- (7) Buying and selling of gold and silver, whether coined or uncoined.

(8) Transacting pecuniary agency business on commission.

The principal restrictions placed on the business of the Banks are as follows :—

- (1) The drawing, discounting, buying and selling of bills of exchange and other negotiable securities is *confined* to bills and securities payable in India and Ceylon.
- (2) Borrowing of money is only permitted in India.
- (3) Loans or advances upon mortgage or in any other manner upon the security of any immovable property or the documents of title relating thereto is expressly prohibited.
- (4) The amount which may be advanced to any individual or partnership by way of discount or on personal security is limited to an amount prescribed in the Bye-Laws of the Banks, such Bye-Laws having previously been approved by Government.
- (5) Loans or advances cannot be granted for a longer period than six months at a time.
- (6) Discounts cannot be made or advances on personal security be given, unless such discounts or advances carry with them the several responsibilities of at least two persons or firms unconnected with each other in general partnership.

Various representations have been made to Government by the Banks to have certain of these restrictions withdrawn, particularly those referred to under Nos. 1 and 2, which latter effectually prevent the Banks from doing anything in the nature of exchange business and from having access to the London money market for borrowing purposes. The restrictions in question were imposed at a time when the Government deposits formed a very large proportion of the Banks' total deposit and when also, owing to the instability of exchange there was some danger of losses being incurred in engaging in that class of business. The Banks have contended however that as Government deposits now form a very small proportion of the total deposits, and as exchange has definitely been fixed at 16 pence there is no further necessity for the restrictions; and have asked that they should now be withdrawn. It has further been argued that as the Presidency Banks are the ultimate resort of the money market in India, it is necessary, in the interests of trade, that the Banks should have some means open to them of increasing their resources in India in times of pressure and that the best means of giving them this power is to permit them to borrow in London. The Government of India were prepared to meet the Banks wishes in the above connection to a great extent in the year 1903; but the Secretary of State did not approve of the Government proposals, and they were finally negatived in 1906.

Government Deposits.

The proportions which Government deposits have borne from time to time to the total Capital, Reserve and deposit of the three Banks are shown below :—

*In Lakhs of Rupees.*

—	1 Capital.	2 Reserve.	3 Government deposits.	4 Other deposits.	Proportion of Government deposits to 1, 2, 3 & 4.
31st December.					
1886 .. ..	350	82	352	625	24·9 per cent.
1891 .. ..	350	97	297	1412	13·7 „
1896 .. ..	350	158	299	1202	14·2 „
1901 .. ..	360	213	340	1463	14·3 „
1906 .. ..	360	270	307	2745	8·3 „
1907 .. ..	360	291	335	2811	8·8 „
1908 .. ..	360	309	325	2861	8·4 „
1909 .. ..	360	318	319	3265	7·4 „
1910 .. ..	360	331	423	3234	9·7 „
1911 .. ..	360	340	438	3419	9·6 „
1912 .. ..	375	361	426	3578	9·0 „
1913 .. ..	375	370	587	3644	11·8 „
1914 .. ..	375	386	561	4002	10·5 „
1915 .. ..	375	369	487	3860	9·5 „

The Banks have also the management of the debt of a number of the Municipalities, Port Trusts and Improvement Trusts throughout India.

Government policy in regard to the disposal of their surplus treasury balances in India has been strongly criticised at various times during the last thirty years or so, and it has been argued that the high rates of interest which are so common a feature in India when the crops come to be marketed are to a very large extent due to Government action in withdrawing money from the market when it is most needed and locking it up in the Reserve Treasuries. This question was considered at some length by the Royal Commission on Indian Finance and Currency *q. v.* which arrived at the conclusion that the present methods of dealing with the balances were open to criticism. The Commission further stated that the most obvious remedy would be to close the Reserve Treasuries and place the whole of the Government balances in the Presidency towns with the Presidency Banks; but their final recommendation in this connection was that Government should make loans from their balances to the Presidency Banks—such loans to be

within the absolute discretion of Government and to be granted only on good security and for short periods. It is not known how far the Government of India are prepared to accept the Commission's recommendation in this respect; but it is understood that the matter is presently under consideration.

The question of the establishment of a State Bank was considered at some length by the Commission and a considerable mass of evidence was taken on this point. The opinions offered were however very conflicting, and although a draft scheme for such a Bank was drawn up by two of the Members of the Commission, the Commission as a whole finally came to the conclusion that they were not in a position to make recommendations one way or the other on the question of a State Bank. It was suggested that a small expert body should be appointed in India to study the whole question and it is understood that the Government of India have the question of appointing such a Committee presently under consideration.

### Recent Progress.

The following statements show the progress made by the three Banks within recent years :—

#### *In Lakhs of Rupees.*

#### BANK OF BENGAL.

	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
31st December.							
1890 .. ..	200	47	226	666	639	206	9½ per cent.
1895 .. ..	200	68	184	677	422	132	10 "
1900 .. ..	200	103	155	582	243	186	11 "
1905 .. ..	200	140	167	1204	396	181	12 "
1906 .. ..	200	150	160	1505	528	149	12 "
1907 .. ..	200	157	187	1573	480	279	12 "
1908 .. ..	200	165	178	1575	507	349	13 "
1909 .. ..	200	170	168	1760	615	411	14 "
1910 .. ..	200	175	198	1600	514	368	14 "
1911 .. ..	200	180	270	1677	729	321	14 "
1912 .. ..	200	185	234	1711	665	310	14 "
1913 .. ..	200	191	301	1824	840	319	14 "
1914 .. ..	200	200	287	2100	1169	621	16 "
1915 .. ..	200	*204	265	1978	785	793	16 "

\* Includes Rs. 50 lakhs as a reserve for depreciation of investments.

#### BANK OF BOMBAY.

	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
1890 .. ..	100	33	83	619	573	78	10 per cent.
1895 .. ..	100	51	76	358	228	105	11 "
1900 .. ..	100	70	87	432	129	89	11 "
1905 .. ..	100	87	92	676	259	158	12 "
1906 .. ..	100	92	101	832	354	177	12 "
1907 .. ..	100	96	112	821	324	164	13 "
1908 .. ..	100	101	94	832	377	149	13 "
1909 .. ..	100	103	120	1035	415	163	13 "
1910 .. ..	100	105	152	1053	436	149	14 "
1911 .. ..	100	106	107	1104	468	208	14 "
1912 .. ..	100	106	117	1124	315	210	14 "
1913 .. ..	100	106	200	1015	477	232	14 "
1914 .. ..	100	110	183	1081	646	202	15 "
1915 .. ..	100	100	136	1079	423	276	15 "

BANK OF MADRAS.

—	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
1890 .. ..	50	14	47	220	155	45	10½ per cent.
1895 .. ..	50	16	45	278	144	45	10
1900 .. ..	60	22	35	260	82	67	8
1905 .. ..	60	30	41	344	140	71	10
1906 .. ..	60	32	54	355	151	81	10
1907 .. ..	60	36	35	416	162	84	10
1908 .. ..	60	40	52	447	153	84	11
1909 .. ..	60	44	49	500	141	79	12
1910 .. ..	60	48	72	567	184	85	12
1911 .. ..	60	52	59	625	165	104	12
1912 .. ..	75	70	75	743	198	113	12
1913 .. ..	75	73	88	805	219	117	12
1914 .. ..	75	76	91	761	267	134	12
1915 .. ..	75	65	86	803	256	184	12

*Notc.*—(The Banks have power under Sec. 30 (l) to draw Bills of Exchange payable out of India under certain stated circumstances, but this permission is of comparatively little importance.)

**Branches.**

**BANK OF BENGAL.**

**Calcutta—**

Harrison Road, Clive Street & Park Street.

Agra, Akyab, Allahabad, Benares, Cawnpore, Chittagong, Dacca, Delhi, Hyderabad Deccan, Jalpaiguri, Lahore, Lucknow, Moulsmein, Nagpore, Naraingunge, Patna, Rangoon, Secunderabad, Simla.

*Pay Offices.*

Chandpore, Serajgunge and Bombay (*Agency*).

Bombay—Mandvi, Ahmedabad, Akola, Amraoti, Broach, Hyderabad (Sind), Indore, Jalgaon, Karachi, Poona, Rajkot, Sholapur, Sukkur and Surat.

**BANK OF MADRAS.**

Alleppy, Bangalore, Bimlipatam, Calicut, Coconada, Cochin, Coimbatore, Colombo, Guntur, Madura, Mangalore, Masulipatam, Negapatam, Ootacamund, Salem, Tellicherry, Trichinopoly, Trivandrum and Tuticorin.

*Out Stations.*

Bezwada Erode, Narsapur, Rajahmundry and Vizianagram.

**THE EXCHANGE BANKS.**

The Banks carrying on Exchange business in India are merely branch agencies of Banks having their head offices in London, on the Continent, or in the Far East and the United States. Originally their business was confined almost exclusively to the financing of the external trade of India; but in recent years most of them, while continuing to finance this part of India's trade, have also taken an active part in the financing of the internal portion also at the places where their branches are situated.

At one time the Banks carried on their operations in India almost entirely with money borrowed elsewhere, principally in London—the home offices of the Banks attracting deposits for use in India by offering rates of interest much higher than the English Banks were able to quote. Within recent years however it has been discovered that it is possible to attract deposits in India on quite as favourable terms as can be done in London and a very large proportion of the financing done by the Exchange Banks is now carried through by means of money actually borrowed in India. No information is available as to how far each Bank has secured deposits in India but the following statement published by the Director-General of Statistics in India shows how rapidly such deposits have grown in the aggregate within recent years.

**TOTAL DEPOSITS OF ALL EXCHANGE BANKS SECURED IN INDIA.**

*In Lakhs of Rupees.*

1875 .. ..	106
1880 .. ..	339
1885 .. ..	475
1890 .. ..	758
1895 .. ..	1080
1900 .. ..	1050
1901 .. ..	1188
1902 .. ..	1370
1903 .. ..	1614
1904 .. ..	1632
1905 .. ..	1704
1906 .. ..	1808
1907 .. ..	1917
1908 .. ..	1951
1909 .. ..	2027
1910 .. ..	2479
1911 .. ..	2816
1913 .. ..	3103

**Exchange Banks' Investments.**

Turning now to the question of the investment of the Banks' resources, so far as it concerns India, this to a great extent consists of the purchase of bills drawn against imports and exports to and from India.

The financing of the import trade originated and is carried through however for the most

part by Branches outside of India, the Indian Branches' share in the business consisting principally in collecting the amount of the bills at maturity and in furnishing their other branches with information as to the means and standing of the drawees of the bills, and it is as regards the export business that the Indian Branches are more immediately concerned. The Exchange Banks have practically a monopoly of the export finance in India and in view of the dimensions of the trade which has to be dealt with the Banks would under ordinary circumstances require to utilise a very large proportion of their resources in carrying through the business. They are able however by a system of rediscount in London to limit the employment of their own resources to a comparatively small figure in relation to the business they actually put through. No definite information can be secured as to the extent to which rediscounting in London is carried on but the following figures appearing in the balance sheets dated 31st December 1915 of the undernoted Banks will give some idea of this.

**LIABILITY ON BILLS OF EXCHANGE REDISCOUNTED AND STILL CURRENT.**

	£
Chartered Bank of India .. ..	2,923,000
Eastern Bank, Ltd. .. ..	565,000
Hongkong and Shanghai Banking Corporation.	7,145,000
Mercantile Bank of India, Ltd. ..	2,202,000
National Bank of India, Ltd. . .	3,387,000
	<u>16,222,000</u>

The above figures do not of course relate to re-discounts of Indian bills alone, as the Banks operate in other parts of the world also, but it may safely be inferred that bills drawn in India form a very large proportion of the whole.

The bills against exports are largely drawn at three months' sight and may either be "clean"

or be accompanied by the documents relating to the goods in respect of which they are drawn. Most of them are drawn on well known firms at home or against credits opened by Banks or financial houses in England and bearing as they do an Exchange Bank endorsement they are readily taken up by the discount houses and Banks in London. Any bills purchased in India are sent home by the first possible Mail so that presuming they are rediscounted as soon as they reach London the Exchange Banks are able to secure the return of their money in about 16 or 17 days instead of having to wait for three months which would be the case if they were unable to rediscount. It must not be assumed however that all bills are rediscounted as soon as they reach London as at times it suits the Banks to hold up the bills in anticipation of a fall in the London discount rate while on occasions also the Banks prefer to hold the bills on their own account as an investment until maturity.

The Banks place themselves in funds in India for the purpose of purchasing export bills in a variety of ways of which the following are the principal:—

- (1) Proceeds of import bills as they mature.
- (2) Sale of drafts and telegraphic transfers payable in London and elsewhere out of India.
- (3) Purchase of Council Bills and Telegraphic Transfers payable in India from the Secretary of State.
- (4) Imports of bar gold and silver bullion.
- (5) Imports of sovereigns from London, Egypt or Australia.

The remaining business transacted by the Banks in India is of the usual nature and need not be given in detail.

The following is a statement of the position of the various Exchange Banks carrying on business in India as at 31st December 1915.

*In Thousands of £.*

	Capital.	Reserve.	Deposits.	Cash and Investment.
Chartered Bank of India .. ..	1200	1800	21548	10768
Comptoir National D' Es-compte de Paris.	8000	1588	41360	11500
*Delhi and London Bank, Ltd .. ..	337	18	1311	303
Eastern Bank, Ltd. .. ..	600	55	1914	897
Hongkong & Shanghai Bank .. ..	1500	3325	32000	11550
International Banking Corp'n. .. ..	650	650	4824	2392
Mercantile Bank of India .. ..	562	550	6413	2455
National Bank of India .. ..	1000	1175	16447	5461
Russo Asiatic Bank (1912) .. ..	4745	240	38280	7601
Yokohama Specie Bank .. ..	3000	2135	21225	8846

\* Now taken over by the Alliance Bank of India, Ltd.

**JOINT STOCK BANKS.**

Previous to 1906 there were few Banks of this description operating in India, and such as were then in existence were of comparatively small importance and had their business confined to a very restricted area. The rapid development of this class of Bank, which has been so marked a feature in Banking within recent years, really had its origin in Bombay and set in with the establishment of the Bank of India and the Indian Specie Bank in 1906.

After that time there was a perfect stream of new flotations, and although many of the new Companies confined themselves to legitimate banking business, on the other hand a very large number engaged in other businesses in addition and can hardly be properly classed as Banks.

These Banks made very great strides during the first few years of their existence, but it was generally suspected in well informed circles that the business of many of the Banks was

of a very speculative and unsafe character and it was a matter of no great surprise to many people when it became known about two years ago that some of the Banks were in difficulties.

The first important failure to take place was that of the People's Bank of India and the loss of confidence caused by the failure of that Bank resulted in a very large number of other failures, the principal being that of the Indian Specie Bank.

The public have for the time being lost much of their confidence in this class of Bank and deposits to a very large extent have been withdrawn and it is feared that a large portion of the money has gone back into hoards. This is very unfortunate as many of the Banks, particularly the older established concerns, have always been recognised as being conducted on safe and prudent lines.

The following shows the position of the better known existing Banks as it appears in the latest available Balance Sheets :—

*In Lakhs of Rupees.*

—	Capital.	Reserve.	Deposits.	Cash and Investments.
Allahabad Bank, Ltd. .. ..	30	48	517	144
Alliance Bank of Simla, Ltd. .. ..	34	40	806	415
Bank of Baroda, Ltd. .. ..	10	4	104	27
Bank of India, Ltd. .. ..	50	7	201	73
Bank of Mysore, Ltd. .. ..	10	3	38	17
Bank of Rangoon, Ltd. .. ..	16	4	20	10
Bengal National Bank, Ltd. .. ..	8	1	5	..
Bombay Merchants Bank, Ltd. .. ..	14	..	4	..
Central Bank of India, Ltd. .. ..	15	1	85	29
Indian Bank, Ltd. .. ..	10	1½	24	7
Karachi Bank, Ltd. .. ..	2	..	4	1
National Financing and Commission Corporation, Ltd. .. ..	16	..	3	1
Oudh Commercial Bank, Ltd. .. ..	5	3	12	3
Poona Bank, Ltd. .. ..	11	1	4	2
Punjab Banking Co., Ltd. .. ..	6	15	118	67
Punjab National Bank, Ltd. .. ..	10	11	94	42
Standard Bank, Ltd. .. ..	10	..	2	1

The principal Banks which have gone into liquidation during the last two or three years are given below along with a Statement of their Capital Reserve and deposits as at the date of the latest available Balance Sheets :—

*In Lakhs of Rupees.*

—	Capital.	Reserve.	Deposits.
Bank of Upper India (1912) .. ..	10	9	101
Bombay Banking Co. .. ..	1	..	15
Credit Bank of India, Ltd. .. ..	10	..	51
Deccan Bank, Ltd. .. ..	1	..	11
Indian Specie Bank, Ltd. .. ..	75	15	270
Kathiawad and Ahmedabad Banking Corporation .. ..	7	..	23
Lahore Bank, Ltd. (1912) .. ..	1	..	23
People's Bank of India, Ltd. .. ..	12	2	127
Punjab Co-operative Bank, Ltd. (1912) .. ..	7	2	60
The Pioneer Bank .. ..	3-84	..	1-96



**Growth of Joint Stock Banks.**

The following figures appearing in the Report of the Director General of Statistics shows the growth of the Capital, Reserve and Deposits of the principal Joint Stock Banks registered in India :—

In Lakhs of rupees.

	Capital.	Reserve.	Deposits.
1870 ..	9	1	13
1875 ..	14	2	27
1880 ..	18	3	63
1885 ..	18	5	94
1890 ..	33	17	270

	Capital.	Reserve.	Deposits.
1895 ..	63	31	566
1900 ..	82	45	807
1905 ..	84	77	1198
1906 ..	183	56	1155
1907 ..	229	63	1400
1908 ..	239	69	1626
1909 ..	266	87	2049
1910 ..	275	100	2565
1911 ..	285	126	2529

	Capital and Reserve.	Deposits.
1913 ..	364	2259

**NATIVE PRIVATE BANKERS AND SHROFFS.**

Native private Bankers and Shroffs flourished in India long before Joint Stock Banks were ever thought of, and it seems likely that they will continue to thrive for some very considerable time to come. The use of the word "Shroff" is usually associated with a person who charges usurious rates of interest to impecunious people, but this is hardly fair to the people known as "shroffs" in banking circles, as there is no doubt that the latter are of very real service to the business community and of very great assistance to Banks in India. Under present conditions the Banks in India can never hope to be able to get into sufficiently close touch with the affairs of the vast trading community in India to enable them to grant accommodation to more than a few of these traders direct, and it is in his capacity as middleman that the shroff proves of such great service. In this capacity also he brings a very considerable volume of business within the scope of the Presidency Banks Act, and enables the Presidency Banks to give accommodation which, without his assistance, the Banks would not be permitted to give. The shroff's position as an intermediary between the trading community and the Banks usually arises in something after the following manner. A Shopkeeper in the bazaar, with limited means of his own, finds that, after using all his own money, he still requires say Rs. 25,000 to stock his shop suitably. He thereupon approaches the shroff, and the latter after very careful inquiries as to the shopkeeper's position grants the accommodation, if he is satisfied that the business is safe. The business, as a rule, is arranged through a hoondie broker, and in the case referred to the latter may probably approach about ten shroffs and secure accommodation from them to the extent of Rs. 2,500 each. A hoondie usually drawn at a currency of about 2 months is almost invariably taken by the shroffs in respect of such advances.

A stage is reached however when the demands on the shroffs are greater than they are able to meet out of their own money, and it is at this point that the assistance of the Banks is called to requisition. The shroffs do this by taking a number of the bills they already hold to the Banks for discount under their endorsement and the Banks accept such bills freely to an extent determined in each case by the standing of the shroff and the strength of the drawers. The extent to which any one shroff may grant accommodation in the bazaar is therefore

dependent on two factors, viz., (1) the limit which he himself may think it advisable to place on his transactions, and (2) the extent to which the Banks are prepared to discount bills bearing his endorsement. The shroffs keep in very close touch with all the traders to whom they grant accommodation, and past experience has shown that the class of business above referred to is one of the safest the Banks can engage in.

The rates charged by the shroffs are usually based on the rates at which they in turn can discount the bills with the Banks and necessarily vary according to the standing of the borrower and with the season of the year. Generally speaking, however, a charge of two annas per cent. per mensem above the Bank's rate of discount, or  $1\frac{1}{2}\%$  is a fair average rate charged in Bombay to a first class borrower. Rates in Calcutta and Madras are on a slightly higher scale due in a great measure to the fact that the competition among the shroffs for business is not so keen in these places as it is in Bombay.

The shroffs who engage in the class of business above described are principally Marwaries and Mitalanis having their head Offices for the most part in Bikanir and Shikarpur, respectively, the business elsewhere than at the Head Offices being carried on by "Moonimis" who have very wide powers.

It is not known to what extent native bankers and shroffs receive deposits and engage in exchange business throughout India, but there is no doubt that this is done to a very considerable extent.

Since the outbreak of war many of the shroffs, particularly those of the Marwari community, have discontinued their "Endorsing" business to a large extent and in some cases they have actually closed their places of business and retired to their native places. The small traders who formerly relied on the shroffs to provide them with funds have been greatly hampered in business in consequence and some indication of the restriction of credit arising from this cause may be gathered from the following figures relating to the discounts of the Presidency Banks.

	Discounts current on 30th June 1918.	Discounts current on 30th June 1918.
	Rs.	Rs.
Bank of Bengal .	332 lacs.	224 lacs.
Bank of Bombay. 216 "		98 "
Bank of Madras . 152 "		82 "
	700 lacs.	404 lacs.

## THE BANK RATE.

Each Presidency Bank fixes its own Bank rate, and the current rate of each Bank determines to a great extent the rates for all important classes of business within the Bank's sphere of influence. The rates in the three Presidencies are not always uniform, but it seldom happens that a difference of more than 1% exists, more particularly as regards Bombay and Bengal, which seem to be in closer touch with each other than appears to be the case with Madras.

The rate fixed represents the rate charged by the Banks on demand loans against Government securities only and advances on other securities or discounts are granted as a rule at a slightly higher rate. Ordinarily such advances or discounts are granted at from one-half to one per cent. over the official rate; but this does not always apply and in the monsoon months, when the Bank rate is sometimes nominal, it often happens that such accommodation is granted at the official rate or even less.

The following statement shews the average Bank rate of each Bank since 1881:—

Year.	Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.
1881 ..	5.40	5.08	5.60	4.802	5.717	5.289			
1882 ..	8.08	4.13	6.10	8.177	5.022	6.599			
1883 ..	7.00	6.2	6.6	6.994	6.560	6.777			
1884 ..	9.03	4.17	6.60	8.813	3.946	6.379			
1885 ..	5.90	4.00	4.95	6.767	4.005	5.381			
1886 ..	6.35	6.50	6.42	5.923	6.152	6.037			
1887 ..	7.78	3.73	5.75	7.475	3.804	5.639			
1888 ..	5.90	5.51	5.70	5.736	5.185	5.460			5.60
1889 ..	9.46	4.00	6.73	9.309	4.674	6.991			6.86
1890 ..	9.21	3.28	6.24	8.265	3.315	5.790			5.74
1891 ..	3.88	2.23	3.05	3.502	2.622	3.062			2.92
1892 ..	3.97	3.04	3.50	3.884	3.114	3.499			3.51
1893 ..	5.97	3.84	4.90	5.685	4.076	4.880			5.27
1894 ..	7.55	3.46	5.50	7.425	3.364	5.394			5.00
1895 ..	4.30	3.60	3.95	5.066	3.592	4.329			4.25
1896 ..	5.85	5.10	5.47	5.774	5.608	5.691			5.62
1897 ..	10.11	5.64	7.87	9.884	5.967	7.925			7.97
1898 ..	12.03	4.55	8.20	11.016	5.114	8.065			7.78
1899 ..	6.34	5.42	5.88	6.337	5.494	5.915			6.05
1900 ..	6.9	3.79	5.34	6.414	4.272	5.343			5.87
1901 ..	7.07	3.83	5.45	6.895	4.070	5.482	7.57	4.00	5.83
1902 ..	6.25	3.43	4.84	6.176	3.549	4.862	7.	4.02	5.51
1903 ..	6.7	3.48	5.09	6.265	3.494	4.879	7.13	4.27	5.70
1904 ..	5.15	3.82	4.48	5.560	4.190	4.875	6.42	4.07	5.24
1905 ..	5.77	4.42	5.09	5.558	4.630	5.094	6.04	4.19	5.11
1906 ..	7.24	5.28	6.26	6.950	5.885	6.417	7.15	5.04	6.09
1907 ..	7.81	4.11	5.96	7.635	4.576	6.105	8.24	4.54	6.30
1908 ..	7.84	4.02	5.93	7.417	4.244	5.830	8.38	4.38	6.38
1909 ..	6.47	3.82	5.14	6.580	3.907	5.243	7.55	4.41	5.88
1910 ..	6.19	4.14	5.16	6.143	4.510	5.326	7.17	4.65	5.91
1911 ..	6.55	3.52	5.03	6.657	4.358	5.507	7.59	4.35	5.97
1912 ..	6.01	4.10	5.05	6.242	4.592	5.417	7.51	4.59	6.05
1913 ..	7.23	4.62	5.92	6.569	5.331	5.950	7.76	5.54	6.65
1914 ..	5.52	5.28	5.40	5.939	4.961	5.450	6.68	5.16	5.89
1915 ..	5.81			5.839			5.87		

Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
Date.		Rate.	Date.		Rate.	Date.		Rate.
1904		Per cent.	1905		Per cent.	1902		Per cent.
February .. 11	7		February .. 23	7		January .. 14	6	
" .. 25	6		" .. 9	8		" .. 20	7	
March .. 10	5		March .. 30	7		February .. 6	8	
May .. 19	4		April .. 6	6		May .. 1	7	
June .. 16	3		" .. 14	5		" .. 29	6	
October .. 13	4		" .. 27	4		June .. 12	5	
" .. 20	5		" .. 14	5		" .. 30	4	
1905			July .. 20	3		December .. 23	5	
February .. 2	6		August .. 17	4		1903		
" .. 16	7		September .. 29	5		January .. 12	6	
March .. 9	8		October .. 30	6		February .. 3	7	
" .. 30	7		November .. 14	7		" .. 10	8	
April .. 6	6		December .. 14	7		April .. 20	7	
" .. 14	5		1906			July .. 2	6	
July .. 6	4		January .. 4	8		" .. 13	5	
" .. 27	3		February .. 1	9		" .. 23	4	
August .. 10	4		March .. 22	7		December .. 21	5	
November .. 23	5		April .. 5	6		1904		
" .. 30	6		" .. 12	5		January .. 7	6	
December .. 14	7		" .. 3	6		" .. 21	7	
1906			" .. 17	7		May .. 16	6	
January .. 4	8		" .. 24	6		July .. 30	5	
February .. 1	9		" .. 7	5		December .. 22	5	
March .. 15	8		" .. 28	4		1905		
" .. 22	7		July .. 19	3		January .. 23	6	
" .. 29	6		August .. 9	4		February .. 27	7	
April .. 26	7		" .. 23	5		March .. 13	8	
May .. 24	6		September .. 13	6		April .. 3	7	
June .. 21	5		October .. 20	7		" .. 14	6	
July .. 12	4		November .. 15	7		May .. 8	5	
" .. 9	3		" .. 29	8		" .. 29	6	
August .. 9	4		December .. 6	9		June .. 15	5	
September .. 12	5		1907			July .. 10	4	
November .. 15	6		April .. 18	8		December .. 18	6	
" .. 22	7		" .. 25	7		1906		
" .. 29	8		" .. 2	6		January .. 8	7	
December .. 13	9		" .. 16	5		" .. 16	8	
1907			July .. 4	4		April .. 4	7	
March .. 7	8		" .. 25	3		May .. 28	6	
May .. 2	7		September .. 12	4		June .. 21	5	
" .. 9	6		" .. 26	5		July .. 12	4	
June .. 6	7		November .. 7	6		September .. 17	5	
" .. 20	6		1908			November .. 29	6	
" .. 27	5		January .. 4	7		December .. 6	7	
July .. 4	4		" .. 9	8		" .. 10	8	
August .. 1	3		March .. 5	8		1907		
September .. 26	4		" .. 26	7		January .. 16	9	
November .. 7	5		May .. 21	6		April .. 29	8	
December .. 12	6		June .. 25	5		May .. 6	7	
1908			July .. 2	4		June .. 24	6	
January .. 3	7		" .. 16	3		July .. 1	5	
" .. 9	8							
February .. 6	9							
March .. 19	8							
" .. 26	7							
April .. 16	8							
May .. 28	7							
June .. 25	6							

Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
Date.		Rate.	Date.		Rate.	Date.		Rate.
1908		Per cent.	1908		Per cent.	1907		Per cent.
July ..	2	5	September ..	3	4	July ..	8	4
" ..	16	4	November ..	5	5	November ..	4	5
" ..	23	3	" ..	26	6	December ..	5	6
October ..	22	4	1909			" 1908 ..	23	7
November ..	5	5	January ..	14	7	January ..	9	8
December ..	10	6	" ..	23	8	February ..	10	9
1909			March ..	18	7	May ..	18	9
January ..	14	7	April ..	29	6	June ..	15	7
May ..	13	6	May ..	27	5	" ..	25	0
June ..	3	5	June ..	17	4	July ..	7	5
July ..	24	4	July ..	1	3	" ..	14	4
November ..	15	3	September ..	30	4	November ..	30	5
" ..	4	4	November ..	13	5	December ..	10	6
" ..	18	5	December ..	9	6	1909		
" ..	25	6	1910			January ..	12	7
March ..	3	7	March ..	3	7	June ..	23	8
May ..	12	6	May ..	12	6	" ..	1	7
June ..	2	5	June ..	2	5	" ..	17	6
" ..	23	4	" ..	16	4	July ..	23	5
July ..	7	3	" ..	30	3	" ..	19	4
October ..	6	4	September ..	22	4	November ..	16	5
November ..	3	5	October ..	6	5	December ..	20	6
December ..	17	6	November ..	3	6	1910		
1911			December ..	1	7	January ..	4	7
February ..	15	7	1911			March ..	7	8
May ..	18	6	February ..	23	8	May ..	13	7
June ..	1	5	March ..	30	7	June ..	7	6
" ..	21	4	May ..	11	6	" ..	20	5
July ..	13	3	June ..	1	5	July ..	4	4
October ..	19	4	" ..	15	4	November ..	8	5
December ..	21	5	August ..	3	2	" ..	18	6
1912			" ..	31	4	December ..	20	7
January ..	11	6	September ..	28	5	" ..	22	8
" ..	18	7	1912			1911		
February ..	1	8	January ..	11	6	May ..	23	7
" ..	22	7	" ..	18	7	June ..	7	6
March ..	20	6	" ..	26	8	" ..	19	5
May ..	9	5	March ..	7	7	July ..	7	4
June ..	13	4	" ..	21	6	November ..	14	5
July ..	11	3	May ..	23	5	December ..	21	6
October ..	3	4	June ..	20	4	1912		
November ..	14	5	July ..	11	3	January ..	9	7
" ..	28	6	September ..	13	4	" ..	20	8
December ..	12	7	October ..	3	5	May ..	29	7
" ..	27	8	November ..	14	6	June ..	17	6
1913			" ..	28	7	" ..	24	5
April ..	3	7	1913			July ..	8	4
May ..	29	6	January ..	9	8	November ..	12	5
June ..	12	5	February ..	13	7	December ..	2	6
July ..	3	4	April ..	17	6	" ..	9	7
" ..	17	3	June ..	5	5	1913		
August ..	7	4	" ..	19	4	June ..	4	7
September ..	10	5	July ..	8	3	" ..	16	6
October ..	10	6	August ..	7	4	July ..	8	5
" ..	31	5	" ..	28	5			
			September ..	18	6			
			November ..	13	7			

Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
Date.		Rate.	Date.		Rate.	Date.		Rate.
1914			1914			1914		
January	.. 15	6	March	.. 19	6	October	.. 1	6
May	.. 21	5	May	.. 1	5			
June	.. 4	4	June	.. 4	4			
"	.. 25	3	July	.. 9	3			
August	.. 6	4	August	.. 6	5	January	.. 2	7
"	.. 13	5	November	.. 5	6	May	.. 25	6
"	.. 20	6				June	.. 8	5
						"	.. 23	4
						August	.. 21	5
						October	.. 12	6
1915			1915			1915		
June	.. 2	5	June	.. 2	5			
November	.. 4	6	September	.. 23	6			
1916			1916			June	.. 7	5
January	.. 6	7	January	.. 1	7	October	.. 4	6
"	.. 13	8	"	.. 20	8	December	.. 20	7
April	.. 13	7				1916		
May	.. 25	6	April	.. 14	7	January	.. 17	8
June	.. 15	5	June	.. 1	6	June	.. 5	7
July	.. 13	4	"	.. 22	5	"	.. 19	6
August	.. 17	5						

### BANKERS' CLEARING HOUSES.

The principal Clearing Houses in India are those of Calcutta, Bombay, Madras, and Karachi, and of these the first two are by far the most important. The members at these places consist of the Presidency Banks, most of the Exchange Banks and English Banking Agency firms, and a few of the better known of the local Joint Stock Banks. No Bank is entitled to claim to be a member as of right and any application for admission to a Clearing must be proposed and seconded by two members and be subject thereafter to ballot by the existing members.

The duties of settling Bank are undertaken by the Presidency Bank at each of the places mentioned and a representative of each member attends at the office of that Bank on each business day at the time fixed to deliver all cheques he may have negotiated on other members and to receive in exchange all cheques drawn on him negotiated by the latter. After all the cheques have been received and delivered the representative of each Bank advises the settling Bank of the difference between his total receipts and deliveries and the settling Bank thereafter strikes a final balance to satisfy itself that the totals of the debtor balances agree with the total of the creditor balances. The debtor Banks thereafter arrange to pay

the amounts due by them to the settling Bank during the course of the day and the latter in turn arranges to pay on receipt of those amounts the balances due to the creditor Banks. In practice however all the members keep Bank accounts with the settling Bank so that the final balances are settled by cheques and book entries thus doing away with the necessity for cash in any form.

The Clearing House figures can usually be taken as giving some indication as to the condition of trade and to some extent also as to how far the banking facilities available are being taken advantage of but in the latter respect at all events the statistics for India do not form as useful a guide as those in most other countries. This is due to the fact that hardly any of the numerous Joint Stock Banks which have been formed within recent years have so far been admitted as members of the various Clearing Houses and as few if any of these Banks have obtained the assistance of the members in having their cheques cleared; the Clearing House returns merely represent the transactions of the members and do not include in any way the totals of the cheques drawn on or negotiated by Banks not represented on the Clearing.

The figures for the Clearing Houses in India above referred to are given below :—

**Total amount of Cheques Cleared Annually.**

*In lakhs of Rupees.*

—				Calcutta.	Bombay.	Madras.	Karachi.	Total.
101	..	..	..	Not available	6,511	1,338	178	8,027
102	..	..	..	....	7,013	1,295	268	8,576
103	..	..	..	....	8,762	1,464	340	10,566
104	..	..	..	....	9,492	1,536	365	11,393
105	..	..	..	....	10,927	1,560	324	12,811
106	..	..	..	....	10,912	1,583	400	12,895
107	..	..	..	22,444	12,645	1,548	530	37,167
108	..	..	..	21,281	12,585	1,754	643	36,263
109	..	..	..	19,776	14,375	1,948	702	36,801
110	..	..	..	22,238	16,652	2,117	755	41,762
111	..	..	..	25,763	17,605	2,083	762	46,213
112	..	..	..	28,831	20,831	1,152	1,159	52,835
113	..	..	..	33,133	21,800	2,310	1,210	58,582
114	..	..	..	28,031	17,696	2,127	1,315	49,169
115	..	..	..	32,263	16,462	1,887	1,352	51,967

**Government of India Rupee Loans.**

The following are the Loans in the hands of the public still extant, all the others having been extinguished either by conversion or by discharge :—

- (1) Three & a half per cent. loan of 1842-43
- (2) Ditto 1854-55
- (3) Ditto 1865
- (4) Ditto 1879
- (5) Three per cent. loan of 1896-97
- (6) Three & a half per cent. loan of 1900-01
- (7) 4 per cent. Terminable loan of 1915-16
- (8) 4 per cent. Conversion loan of 1916-17

The first four of these loans were made repayable at the option of Government on or after 31st July 1904 on three months' notice being given so that the position now as regards these loans is that Government are at liberty to discharge them at any time on giving three months' notice. In view however of the necessity of fresh borrowings by Government this power is not likely to be exercised for some considerable time to come.

The  $\frac{3}{4}$  per cent. Loan of 1900-01 is repayable, also at the option of Government, on or after 31st December 1920 on three months' notice being given and all loans issued since the year 1900 have been included in and form part of the 1900-01 loan.

In 1896 Government resolved in view of the easy condition of the money market to try the experiment of borrowing at 3 per cent. and the loan of Rs. 4 crores raised in that year was accordingly issued bearing that rate of interest. The opportunity was also taken to advertise for discharge the two  $\frac{3}{4}$  per cent. loans of 1853-54 and 1893-94 but proprietors of these loans were given the option of transferring their holdings to the new 3 per cent. loan. The Rs. 4 crores loan was successfully floated and appeared to be a great success but it was soon seen that the public had no use for a 3 per cent.

security and Government have never repeated the attempt to borrow at 3 per cent. The successful tenderers for the loan of 1896-97 experienced great difficulty in disposing of any part of their holdings and as through course of time the notes became practically unmarketable it was generally felt that Government must do something to improve the market for the notes. Various proposals were submitted to Government with this end in view but the latter delayed taking any action in the matter until the year 1908. Such action took the form of giving holders the option of converting their 3 per cent. notes into  $\frac{3}{4}$  per cent. notes of the 1900-01 loan on the following terms :—

- (1) If the face value of the 3 per cent. notes tendered for conversion is an exact multiple of Rs. 700 the tenderer will receive in exchange  $\frac{3}{4}$  per cent. notes for  $\frac{6}{7}$ ths of such face value.
- (2) If the face value of the 3 per cent. notes tendered for conversion does not form an exact multiple of Rs. 700 the tenderer has the option of receiving—
  - (a)  $\frac{3}{4}$  per cent. notes equivalent to the nearest lower multiple of Rs. 700 calculated as in Clause 1 together with the difference in 3 per cent. notes, or
  - (b)  $\frac{3}{4}$  per cent. notes of the nearest higher equivalent face value in hundreds calculated as in Clause 1 on payment in cash of the difference between
    - (i)  $\frac{6}{7}$ ths of the face value of the 3 per cent. notes tendered and
    - (ii) the face value of the  $\frac{3}{4}$  per cent. notes received in exchange.

The above offer is still in force but Government have reserved the right to withdraw it at any time on giving 6 months' notice. The balance of the 3 per cent. loan stood at Rs. 10,95 lacs on 31st March 1897, at Rs. 11,07 lacs on 30th September 1908 at Rs. 8,42 lacs on 31st March 1913 and at 7,75 lacs on 31st March 1916. The work connected with the payment of interest, &c., on Government loans is

entrusted to the Presidency Banks in the 3 Presidency towns, to the District Treasuries elsewhere in India, and to the Bank of England in London.

The 4 per cent. Terminable Loan of 1915-1916 was issued at par in August 1915 and the Loan if not previously redeemed will be repaid at par on 30th November 1923, Government however reserves the right to redeem the loan or any part of it at any time on or after the 30th November 1920 on giving three months' notice. A new departure was made when issuing this loan—the public were permitted to make applications through the Post Office for sums not exceeding Rs. 5,000. Such applications received allotment in full. The offer remained open until 30th Oct., and resulted in a further subscription of forty-four lakhs.

The 4 per cent. Conversion Loan of 1916-17 was issued at par in June 1916 and the total tenders, exclusive of those received through the Post Office, amounted to Rs. 6,35 lacs, all of which were accepted by Government. Allotments of this loan carried with them the right to convert an equivalent amount of 3½ per cent. or 3 per cent. securities into the 4 per cent. Loan at the rates of 96 per cent. and 82½ per cent. respectively.

Government debt may be held in the form of promissory notes or Stock Certificates but Notes or Certificates can only be issued in even hundreds of rupees. Promissory notes are transferable by endorsement and as such transfers do not require to be registered it follows that Government do not keep any record of the holders of such notes from time to time. A holder of a Stock Certificate is a registered holder however and transfers can only be made by transfer deed which must be submitted to and approved of by the authorities conducting the loan business on behalf of Government.

The question of issuing Bearer Bonds with or without coupons attached, is presently being considered by Government and it seems likely that this form of security will be issued in the near future.

Interest is payable half-yearly on each loan on the dates noted below.

Loan of 1842-43	1st Feby. & 1st August
Loan of 1854-55	30th June & 31st Decr.
Loan of 1865	1st May & 1st Novr.
Loan of 1879	16th Jany. & 16th July
Loan of 1896-97	30th June & 31st Decr.
Loan of 1900-01	30th June & 31st Decr.

Interest may be made payable at the option of the holder at the Public Debt Office Banks of Bengal, Bombay or Madras, at any Government Treasury, or at the Bank of England, London. In the case of Promissory Notes, presentation of the notes at the office where interest is payable is necessary before interest can be drawn but this does not apply as regards Stock Certificates and interest warrants in respect of these are sent out to the registered holder as soon as interest falls due. The interest on notes enclosed to London is paid by rupee drafts on India.

## Renewal, Conversion, Consolidation and Sub-Division of Promissory Notes.

### RENEWAL.

When all the spaces reserved for endorsements on the reverse of a note have been filled up or when the spaces utilised for recording payments of interest have been exhausted the note requires to be renewed before any further transfers can be allowed or interest drawn. The fee for such renewal is at the rate of ½ per cent. on the face value of the note subject to a maximum of Re. 1 for each note but no renewal fee is charged in the case of a note on which no endorsements appear when the interest charges are expended.

### CONVERSION.

Promissory Notes of the 3½ per cent. loans of 1842-43, 1854-55, 1865, 1879 and 1900-01 may be transferred to any other of those loans except that no transfer to the loan of 1900-01 from any of the other loans is admissible.

It is made a condition however before any such transfer is permitted that a full half-year's interest is due on the Promissory Note at the time it is presented for transfer.

The fees charged are the same as those applicable to renewals.

### CONSOLIDATION AND SUB-DIVISION.

Notes of the same loan, on which interest has been paid up to the same date, may be consolidated or notes may be sub-divided into others of smaller denominations, but of the same loan, at the option of the proprietors, notes only being issued for Rs. 100 or multiples of Rs. 100.

The fee charged is at the rate of ½ per cent. on the face value of the new notes received, subject to a maximum of Re. 1 for each note.

The management of the debt in England is entrusted to the Bank of England who are paid commission at the rate of £300 per million pounds in respect of the sterling debt and £400 per crore of rupees in respect of the rupee debt. The charge for the latter is however subject to a minimum of £3,000.

### Quotations for 3½ per cent. Government of India Loans.

Jany.		Rupee Loan.		Sterling Loan.	
		Rs.	per cent.	£	per cent.
1895	..	103.6	per cent.	112½	per cent.
1896	..	105.7	"	117	"
1897	..	98	"	118½	"
1898	..	95.13	"	117	"
1899	..	94	"	116½	"
1900	..	95.10	"	110	"
1901	..	96	"	108	"
1902	..	95.14	"	108	"
1903	..	97.9	"	107	"
1904	..	95.2	"	103	"
1905	..	98.1	"	106½	"
1906	..	97.14	"	105½	"
1907	..	95.7	"	104	"
1908	..	96.3	"	102½	"
1909	..	94.11	"	99	"
1910	..	93.7	"	98½	"
1911	..	95.1	"	95½	"
1912	..	96.2	"	94	"
1913	..	94.9	"	91.7-16	"
1914	..	95.10	"	85½	"
1915	..	81 (Dec.)	"	Nominal.	"
1916	..	75.8 (Sept.)	"	70½	"

## FAILURES OF INDIAN BANKS.

In the Indian Year Book for 1915 a full count was given of the disastrous failures of Indian banks, which commenced in 1913 and were continued throughout the greater part of the following year. Further, the statistical position of all these banks was set out in tables. For complete details of this painful episode in the financial history of the country reference must be made to that volume. The suits of this acute commercial crisis are summarised below, and the liquidators' reports of the principal bank that failed, the Indian People's Bank of Bombay, are appended. During the year 1914, 43 banks failed with an aggregate paid-up capital of Rs. 1,09,12,000 against 14 banks with an aggregate paid-up capital of Rs. 35,27,000 during the year 1913. It may be noted here that of the 6 banks with an

aggregate paid-up capital of Rs. 1,76,000 which failed in 1915, the only one of any importance was the Amritsar National Banking Company which went into liquidation on the 4th July 1915. This bank had a paid-up capital of Rs. 1,07,980 and deposits amounting to Rs. 1,07,658. Altogether 63 banks have failed since the banking crisis began with the failure of the People's Bank of India in the Punjab, which went into liquidation on the 17th November 1913. The authorised capital of all these banks aggregated Rs. 10,13,80,000, the subscribed capital Rs. 4,12,58,000 or 40·7 per cent. of the authorised capital, and the paid-up capital Rs. 1,46,15,000, or 14·4 per cent. of the authorised and 35·4 per cent. of the subscribed capital.

o.	Name or Company.	CAPITAL.			Amount of Deposits.	Date of going into liquidation.
		Authorised.	Subscribed.	Paid-up.		
	PUNJAB.	Rs.	Rs.	Rs.	Rs.	1914
1	Hindustan Bank, Multan .. ..	10,00,000	2,13,975	1,20,811	10,53,999	19th Jan
2	Industrial Bank of India, Ludhiana ..	5,00,000	1,80,000	51,208	3,97,317	7th Feb
3	Public Banking and Assurance Co., Multan .. ..	10,00,000	17,300	1,964	....	2nd March.
4	Bank of Peshawar, Multan .. ..	5,00,000	4,50,900	1,04,271	2,22,864	14th Feb.
5	Coronation Banking and Assurance Co., Lahore .. ..	1,00,000	....	....	....	3rd Feb
6	Marwar Bank, Lahore.	10,00,000	4,91,100	1,51,801	8,30,466	14th June.
7	Popular Bank, Rawalpindi .. ..	50,00,000	20,00,000	3,21,506	18,62,641	28th July.
8	Bank of Rajputana and Punjab, Ambala .. ..	5,00,000	2,45,475	70,501	8,25,065	3rd March.
9	Bank of Empire, Lahore .. ..	5,00,000	1,15,425	23,875	96,144	6th July.
10	Darajat Sindh Bank, Multan .. ..	5,00,000	84,300	11,110	8,972	22nd April.
11	Golden Bank of India, Amritsar .. ..	5,00,000	16,775	3,042	....	21st April.
12	Solar Bank, Lahore ..	1,00,00,000	1,55,000	8,500	....	29th March.
13	Indian States Bank, Amritsar .. ..	10,00,000	20,000	2,335	....	27th March.
14	Orient Bank of India, Lahore .. ..	25,00,000	10,00,000	71,551	4,94,068	4th Sept.
15	Punjab Co-operative Bank, Amritsar ..	25,00,000	10,00,000	8,18,519	45,75,641	September.
16	Capital Bank of India, Lahore .. ..	10,00,000	50,065	5,950	7,840	28th Sept.



No.	Name of Company.	CAPITAL			Amount of Deposits.	Date of going into liquidation.
		Authorised.	Subscribed.	Paid-up.		
		Rs.	Rs.	Rs.	Rs.	1914.
17	George Bank, Lahore ..	2,50,000	1,30,700	48,305	1,04,310	19th June.
18	Commercial and Zamindari Bank, Multan ..	2,50,000	31,950	2,000	....	21st July.
19	East India Banking Co., Jagraon ..	25,00,000	....	....	....	1st Jan.
20	Jullundur Bank, Jullundur ..	5,00,000	1,17,650	26,705	1,18,545	....
21	World Bank, Amritsar ..	5,00,000	....	....	....	....
22	Bank of Asia, Lahore ..	25,00,000	4,65,450	32,000	76,781	29th Nov.
	<b>TOTAL, PUNJAB ..</b>	<b>3,46,00,000</b>	<b>68,25,065</b>	<b>18,82,099</b>		
	<b>BOMBAY.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>Rs.</b>	<b>1914.</b>
1	Gujarat Bank ..	5,00,000	1,75,100	84,825	No information.	24th Mar. 4th Mar. 12th Oct. .... 8th May. 7th Oct. 3rd June.
2	Indian Specie Bank ..	2,00,00,000	1,50,00,000	74,88,850		
3	Ahmednagar Bank ..	5,00,000	1,38,000	30,110		
4	Sind Bank ..	25,00,000	3,26,700	82,295		
5	Indian Finance Corporation ..	5,00,000	18,410	18,410		
6	All-India Commerce Bank ..	10,00,000	....	....		
7	Union Bank of Commerce ..	50,00,000	....	....		
	<b>TOTAL, BOMBAY ..</b>	<b>3,00,00,000</b>	<b>1,56,58,210</b>	<b>77,12,690</b>		
	<b>UNITED PROVINCES</b>					
1	United Provinces Co-operative Bank, Allahabad ..	10,00,000	45,740	27,105	1,02,930	1914. 17th June.
2	Commercial Bank of India, Ghazipur ..	10,00,000	5,775	4,250	18,655	2nd July.
3	Sri Kashi Vishwanath Bank, Benares ..	1,00,000	3,692	3,782	4,299	3rd Aug.
4	United India Bank, Allahabad ..	5,00,000	39,104	26,733	....	12th Dec.
5	People's Industrial Bank, Allahabad ..	5,00,000	68,570	35,015	....	....
6	Asiatic Engineering and Banking Corporation ..	20,000	1,410	1,410	217	....
7	Central Reciprocal Bank, Allahabad ..	2,00,000	....	....	....	....
8	Bank of Upper India, Meerut ..	10,00,000	10,00,000	10,00,000	1,83,53,245	October.
	<b>TOTAL, UNITED PROVINCES ..</b>	<b>43,20,000</b>	<b>11,64,491</b>	<b>10,98,295</b>		

No.	Name of Company.	CAPITAL.			Amount of Deposits.	Date of going into liquidation.
		Authorised.	Subscribed.	Paid-up.		
	MADRAS.	Rs.	Rs.	Rs.	Rs.	1914
1	Madras Deposit and Benefit Society ..	50,000	50,000	50,000	....	16th Mar
2	Sri Krishna Bank ..	5,00,000	5,00,000	2,125	....	31st Mar.
	TOTAL, MADRAS ..	5,50,000	5,50,000	52,125		
	N.-W. F. PROVINCE	Rs.	Rs.	Rs.	Rs.	1914.
1	Punjab Trader's Bank, Peshawar .. ..	2,50,000	1,84,200	51,002	10,207	5th April.
	DELHI.					
1	Union Bank of India ..	2,50,000	1,25,000	96,820	4,19,514	4th Oct.
2	Imperial Bank ..	10,00,000	40,000	7,970	3,606	15th Oct.
	TOTAL, DELHI ..	12,50,000	1,65,000	1,04,790		
	BANGALORE.					
	(CIVIL AND MILITARY STATION).					
1	Rajadhandy Bank ..	80,000	13,750	10,404	....	....
43	GRAND TOTAL ..	7,10,50,000	2,45,61,316	1,09,12,363		

**People's Bank of India.**

The Official Liquidators' report, published in November, 1916, states that the first general dividend, at the rate of Re. 0-2-8 in the rupee was distributed mainly during the months October, 1915, to March, 1916. A second general dividend, at the rate of Re. 0-1-4 in the rupee, will be declared on the 15th January, 1917. In addition to the general dividend, distributed, some 8,000 claims of small creditors, aggregating Rs. 2½ lakhs have been settled by cash payment at the rate of Re. 0-10-0 in the rupee. Some 3,000 claims have been discharged at a satisfactory margin of discount in compromise of debts, calls, etc., due to the Bank. The total amount due to creditors at the commencement of the liquidation was Rs. 116½ lakhs. At the 30th September, 1916, it was Rs. 74½ lakhs, whereout some Rs 8 lakhs are held in security for debts, and some 7½ lakhs will be accounted for on payment of the second dividend above referred to.

The total amount realised up to the 30th September, 1916, under the call made upon the contributories was Rs. 3,79,000.

**Prospects.**—The liquidation has now been in progress three years the first dividend of Re. 0-2-8 distributed at the end of the second

year absorbed Rs. 15 lakhs; and the second dividend of Re. 0-1-4 about to be distributed at the end of the third year will absorb Rs. 7½ lakhs.

Taking interest at 5 per cent. this represents a return of Re. 0-3-8 as at the end of the first year.

Had the demand upon the larger debtor companies and individuals for immediate payment been enforced, and the securities knocked down for what they would fetch during the first year, a return of roughly Re. 0-4-0 in the rupee would have constituted the first and final dividend to creditors.

The official liquidators are loth to hold out any promise which events outside their control might render incapable of fulfilment. At the same time, having careful regard to the progress made to date and also to the foreseen difficulties yet to be encountered, they feel warranted in believing that the Bank will ultimately be able to discharge its creditors in full. This, however, must take time; and, although it is proposed to distribute further dividends annually, it is probable that for three years, such dividends will not exceed the rate of Re. 0-1-4 in the rupee each.

**Specie Bank Liquidation.**

On September 8th, 1915, the Official Liquidator held a meeting of the creditors and submitted a statement of the progress of the liquidation which showed results published in the Indian Year Book, 1916. In March, Mr Justice Macleod delivered judgment in the case of the Indian Specie Bank, Ltd. *versus* Sir Vithaldas D. Thackersey and others. In June the Official Liquidator issued a further report which states that the claim first filed against the Directors was as follows:—

	Rs.	a. p.
(1) Losses sustained in silver	1,22,23,174	12 10
(2) Estimated loss on account of advances made on pearls .. .. .	36,43,195	2 0
(3) Estimated loss on share build operations .. .	13,96,405	12 0
(4) Estimated loss on account of imprudent loans .. .. .	4,41,427	0 0
Rs. ..	1,77,04,202	10 10

At the hearing of the suit, says the Official Liquidator's report, the only defendants who appeared, except to consent to a decree, were the fourth defendant (the Thakore Sahab of Morvi) and the eighth defendant (the estate of the late Chumilal Dharamdas Saraya, represented by me as the Official Liquidator) who appeared in person and put the plaintiff to strict proof of the case and the facts alleged in the plaint, and otherwise submitted to such order as the Court might see fit to make. Before the hearing came on all the other Directors had compromised with the Liquidator with the sanction of the Court. The terms on which the other defendants were allowed to **compromise their liabilities** both on account of call and as Directors were as follows:—

(i) Sir Vithaldas D. Thackersey, who was liable to pay Rs. 70,800 on the call on 1,416 shares, was settled with for Rs. 1,85,250 in respect of his liability as Director, and Rs. 70,800 for his liability as a contributory; (ii) Sir Jagmohandas Varjivandas, who was liable for Rs. 2,72,750 as call on 5,455 shares, was settled with for Rs. 5 only, in respect of his liability in the suit, and Rs. 1,40,000 as his call liability. Sir Jagmohandas was not, in fact in a position to pay this compromise without assistance, and had I insisted on the payment of any larger sum, he would have filed his petition in Insolvency, and the Bank would have realised far less than it realises by the compromise; (iii) Sir Jansettee Jejeebhoy, Bart., held no shares and so had no call liability. He was a Director for a short time only, and his liability as such was settled for Rs. 15,000; (iv) Mr. Purshotam Virram Mowji was liable for Rs. 12,500 on 250 shares. The suit was settled as against him for Rs. 2,500, for his liability as a Director, while the full amount of his call liability is exacted; (v) Mr. Charandas Chaturbhuj Morarji also consented to pay Rs. 2,500 for his liability as a Director and his call liability of Rs. 65,000 was compromised for Rs. 62,500; (vi) Mr. Lalubhai Dharamchand's call liability was Rs. 13,350 on 267 shares. His liability in the suit was settled at Rs. 15,000, and the whole call liability is being exacted; (vii) The representatives of the late Lakhamsey

Napoo consented to pay Rs. 87,500 in full satisfaction of the Bank's claim in the suit as against the estate of the deceased *quoad* Director, and Rs. 1,37,500 in settlement of his share liability, totalling Rs. 3,38,050. By this settlement, the heavy costs of fighting out a very doubtful point of Hindu Law were avoided.

Mr. Justice Macleod passed a decree against the 8th defendant, the Administrator of the estate of the late Chumilal D. Saraya, for Rs. 1,22,00,000. The Official Liquidator writes in regard to the suit against the Thakore Sahab of Morvi:—"An arrangement was arrived at by which His Highness agreed to take over a number of shares belonging to the Bank at a fixed price of Rs. 14,75,000, while I on behalf of the Bank, publicly declared that His Highness had throughout acted in a perfectly proper spirit and manner, and consented to the suit being dismissed as against His Highness, each party paying his own costs."

"The only matters now remaining to do are to recover a few good outstandings, and to realise as much as practicable out of the call. So far as the call is concerned, it will be remembered that the subscribed capital of the Bank was Rs. 1,50,00,000 divided into 1,50,000 shares of Rs. 100 each, of which only Rs. 50 each had been paid, leaving a call liability on the shareholders of Rs. 75,00,000. It is, however, absolutely certain that nothing like the full amount of the call can be realised."

**Joint-stock enterprise in India.** Returns compiled in the DEPARTMENT OF STATISTICS show that only 126 companies were registered in 1915-16 with an authorised capital of Rs. 7.03 lakhs against 107 Companies and Rs. 3.91 lakhs in 1914-15, 345 Companies and Rs. 66.64 lakhs in 1913-14, and 284 Companies and Rs. 12.19 lakhs in 1912-13. Nine Companies were registered with an authorised capital of Rs. 20 lakhs and above, twelve with 10 lakhs and under Rs. 20 lakhs, and fifteen Companies from Rs. 4 lakhs to 10 lakhs. The capital invested was distributed amongst the different industries as shown below:—

**Joint-stock Companies registered in  
1915-16.**

	Authorised capital. Rs. (lakhs)	Percentage.
Banking loan, and insurance .. .. .	22	3
Navigation .. .. .	45	6
Railways .. .. .	2.26	32
Trading .. .. .	1.31	19
Cotton mills .. .. .	29	4
Jute mills .. .. .	63	0
Saw Timber mills .. .. .	75	11
Other mills .. .. .	11	2
Tea planting .. .. .	30	4
Other planting .. .. .	7	1
Coal mining .. .. .	17	2
Land and building .. .. .	37	.5
Breweries .. .. .	..	..
Sugar factories .. .. .	..	..
Others .. .. .	15	2
Total ..	7.06	100

## Agriculture.

As crops depend on the existence of plant food and moisture in the soil so the character of the agriculture of a country depends largely on its soil and climate. It is true that geographical situation, the character of the people and other considerations have their influence which is not inconsiderable, but the limitations imposed by the nature of the soil and above all the climate tend to the production of a certain class of agriculture under a certain given set of conditions.

The climate of India, while varying to some extent in degree, in most respects is remarkably similar in character throughout the country. The main factors in common are the monsoon, the dry winter and early summer months, and the intense heat from March till October. These have the effect of dividing the year into two agricultural seasons, the *Kharif* Monsoon and the *Rabi* or Winter Season each having its own distinctive crops. From early till October abundant rains fall over the greater part of the continent while the winter months are generally dry although North-Western India benefits from showers in December and January. The distribution of the rainfall throughout the year, which is of considerable importance to agriculture, is none too favourable, but is not quite so bad as is often represented. The rainfall is greatest at what would otherwise be the hottest time of the year, *viz.*, summer and when it is most needed. It should be remembered that in a hot country intermittent showers are practically valueless as evaporation is very rapid. The distribution of rainfall such as is common in England, for example, would be of little use to Indian soil.

**Soil.**—For the purpose of soil classification India may be conveniently divided into two main areas in (1) The Indo-Gangetic plains, (2) Central and Southern India. The physical features of these two divisions are essentially different. The Indo-Gangetic plains (including the Punjab, Sind, the United Provinces, Bengal, Bihar and Assam) form large level stretches of alluvium of great depth. The top soil varies in texture from sand to clay, the greater part being a light loam, porous in texture, easily worked, and naturally fertile. The greater part of the alluvium tends to keep down the temperature. Central and Southern India on the other hand consist of hills and valleys. The higher uplands are too hot and too near a rock to be suitable for agriculture which is only practised in the valleys where the soil is deeper and cooler and moisture more plentiful. The main difference between the soils of the two tracts is in texture and while the greater part of the land in Northern India is porous and easily cultivated, and moist near to the surface large stretches in Southern and Central India consist of an intractable soil called a Deccan trap, sticky in the rains, hard and unyielding in the dry weather and holding its moisture at lower levels.

**Agricultural Capital and Equipment.**—India is a country of small holdings and the great majority of the people cultivate patches varying in size from one to eight acres. Large holdings are practically unknown, and are mainly

confined to European planters. Farming is carried on with a minimum of capital, there being practically no outlay on fencing, buildings, or implements. The accumulation of capital is prohibited by the occurrence of famine and the high rate of interest, and extravagance of expenditure in marriage celebrations. The organization of co-operative credit which has been taken in hand by Government and which has already proved successful in many provinces will undoubtedly lead to an increase in Agricultural capital.

**Equipment.**—For power the ryat depends chiefly on cattle which, as a rule, are light and active but possess little hauling power. The necessary tillage for crops is brought about by frequency of ploughings, the result being that the soil is seldom tilled as it should be. This is not due in any way to want of knowledge on the part of the people but through want of proper equipment. The Indian Agriculturist, as a rule, possesses an intimate knowledge of the essentials of his own business, and fails through lack of ways and means.

**Implements** are made of wood although ploughs are usually tipped with iron points and there is a great similarity in their shape and general design. The levelling beam is used throughout the greater part of the country in preference to the harrow and roller; and throughout Northern India the plough and the levelling beam are the only implements possessed by the ordinary cultivator.

In the heavier soils of the Deccan trap a cultivating implement consisting of a single blade, resembling in shape a Dutch hoe, is much used. Seed drills and drill hoes are in use in parts of Bombay and Madras but throughout the greater part of the country the seed is either broadcasted or ploughed in. Hand implements consist of various sizes of hoes, the best known of which are the *kodal* or spade with a blade set at an angle towards the labourer who does not use his feet in digging, and the *khurpi* or small hand hoe. Of harvesting machinery there is none, grain is separated either by treading out with oxen or beating out by hand, and winnowing by the agency of the wind.

**Cultivation.**—Cultivation at its best is distinctly good but in the greater part of the country it has plenty of room for improvement. As in any other country success in agriculture varies greatly with the character of the people, depending largely as it does on thrift and industry. In most places considering the large population cultivation is none too good. Agriculture suffers through lack of organization and equipment. Owing to the necessity of protection against thieves, in most parts the people live in villages, many of them at considerable distances from their land. Again, holdings, small though they are, have been subdivided without any regard for convenience. Preparatory tillage generally consists of repeated ploughings, followed as seed time approaches by harrowings with the levelling beam. The *Rabi* crops generally receive a more thorough cultivation than the *Kharif*, a finer seed bed being necessary owing to the dryness of the growing season. Manure is

generally applied to *Kharif* crops. Seeding is either done broadcast or by drilling behind a wooden plough or drill. Thinning and spacing are not nearly so well done as they might be, and intercultivation is generally too superficial. Harvesting is done by sickle where the crops are cut whole, and there is little waste involved. On the whole the methods of the ryats if carried out thoroughly would be quite satisfactory, but it is doubtful if this could be done with the number of cattle at his disposal.

**Irrigation** is necessary over the greater part of the country owing to insufficient rainfall and the vagaries of the monsoon. Canal irrigation has been greatly extended over the Punjab, Sind, United Provinces and Madras through Government canals which, in addition to securing the crops over existing cultivated land have converted large desert tracts into fertile areas. The Punjab and parts of the United Provinces are naturally well suited to canal irrigation owing to the frequency of their rivers. The water is generally taken off at a point a little distance from where the rivers leave the hills and is conducted to the arid plains below. The main canal splits up into diverging branches, which again subdivide up into distributaries from which the village channels receive their supplies. Water rates are levied on the matured areas of crops, Government thus bearing a part of the loss in case of failure. Much of the land is supplied by what is termed flow irrigation, i.e., the land is directly commanded by the canal water, but a great deal has to be lifted from one to three feet the canal running in such cases below the level of the land. Rates for lift irrigation are, of course, lower than those for flow.

Irrigation canals are generally classed into (1) perennial and (2) inundation canals. Perennial canals, which give supplies in all seasons generally have their headworks near the hills, thus commanding a great range of country. Farther from the hills, owing to the very gradual slope of the land and the lowness of the rivers in the cold weather, perennial irrigation is difficult and inundation canals are resorted to. These canals only give irrigation when the rivers are high. As a rule, in Northern India they begin to flow when the rivers rise owing to the melting of the snow on the hills in May and dry up in September.

**Irrigation from Wells.**—About one-quarter of the total irrigation of the country is got from lifting water from wells ranging in depth from a few feet to over fifty feet. Their numbers have greatly increased in recent years largely through Government advances for their construction. The recurring cost of this form of irrigation has, however, greatly increased owing to the high price of draught cattle and the increasing cost of their maintenance.

Tank irrigation is common in Central and Southern India. Large quantities of rain water are stored in lakes (or tanks) and distributed during the drier seasons of the year. The system of distribution is the same as that by canal.

**Manures.**—Feeding of animals for slaughter being practically unknown in India, the amount of farm yard manure generally available in other countries from this source

thus does not exist. This is partially if not entirely made up for by the large number required for tillage and the amount of cows and buffaloes kept for milk. Unfortunately fuel is very scarce and a greater part of the dung of animals has to be used for burning. The most of the trash from crops is used up for the same purpose and the net return of organic matter to the soil is thus insignificant. In some parts cakes of oil seed are used as manures for valuable crops like tea and sugarcane but in the greater part of the country the only manure applied is the balance of farm yard manure available after fuel supplies have been satisfied. Farm yard manure is particularly effective and its value is thoroughly appreciated but the people have much to learn in the way of storage of bulky manures and the conservation of urine.

**Rice.**—A reference to the crop statistics shows that rice is the most extensively grown crop in India, although it preponderates in the wetter parts of the country, viz., in Bengal, Bihar and Burma and Madras. The crop requires for its proper maturing a moist climate with well assured rainfall. The cultivated varieties are numerous, differing greatly in quality and in suitability for various conditions of soil and climate, and the people possess an intimate acquaintance with those grown in their own localities. The better qualities are sown in seed beds and transplanted in the monsoon. Broadcast rice is grown generally in lowlying areas and is sown before the monsoon as it must make a good start before the floods arrive. Deep water rice grows quickly and to a great height and are generally able to keep pace with the rise in water level.

For transplanted rice the soil is generally prepared after the arrival of the monsoon and is worked in a puddle before the seedlings are transplanted. The land is laid out into small areas with raised partitions to regulate the distribution of the water supply. The seedlings are planted in small bunches containing from 4 to 6 plants each and are simply dibbled into the mud at distances of 6 to 12 inches apart. Where available, irrigation water is given at frequent intervals and the fields are kept more or less under water until the crop begins to show signs of ripening.

**Wheat.**—Wheat is grown widely throughout Northern India as a winter crop, the United Provinces and the Punjab supplying about two-thirds of the total area, and probably three quarters of the total output in India. The majority of the varieties grown belong to the Species *Triticum Vulgare*. Indian wheats are generally white, red and amber coloured and are mostly classed as soft from a commercial point of view. The grains are generally plump and well filled but the samples are spoiled through mixtures of various qualities. Indian wheat is generally adulterated to some extent with barley and largely with dirt from the threshing floor and although there is a good demand in England and the Continent for the surplus produce, prices compare unfavourably with those obtained for Canadian and Australian produce. The crop is generally grown after a summer fallow and, except in irrigated tracts, depends largely on the conservation of the soil moisture from the previous monsoon.

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1911-15. The cropped area is always greater than the area of cultivated land, owing to double cropping. The figures represent acres:—

Province.	Rice.	Wheat.	Barley.	Other Food Grains and Pulses.	Total Food Grains and Pulses.	Oilseeds.	Sugar.	Cotton.	Jute.	Total cropped Area.	Net cropped Area after deducting Area cropped more than once.
Bengal ..	20,449,900	134,100	94,600	1,650,500	22,329,100	1,828,300	290,100	63,100	2,872,600	29,639,600	25,208,100
Bihar and Orissa ..	15,948,100	1,253,700	1,303,000	8,614,100	27,118,900	1,848,600	265,700	70,300	331,000	31,646,800	26,027,300
Assam ..	4,752,840	2	25	112,640	4,865,507	329,863	38,166	32,818	105,118	6,414,008	5,888,870
United Provinces ..	6,199,636	7,359,036	4,627,787	20,034,281	33,240,740	846,843	1,194,354	1,532,132	..	44,522,548	36,167,297
Punjab ..	794,277	9,915,507	1,308,474	11,945,891	23,964,149	1,323,566	366,056	1,687,763	..	31,715,882	26,582,244
N. W. Frontier Province.	43,099	1,182,806	421,893	1,114,136	2,761,934	120,647	31,740	60,764	..	3,141,785	2,622,902
Burma..	10,594,443	30,137	..	933,850	11,608,430	1,490,510	38,283	293,113	..	14,918,236	14,363,004
Central Provinces and Berar.	4,919,158	3,265,219	11,357	10,882,439	19,078,173	2,683,093	17,423	4,672,048	..	27,267,332	25,112,175
Madras ..	10,875,909	18,272	2,990	19,492,949	30,390,129	3,388,452	147,527	2,087,442	..	39,090,544	34,601,798
Bombay and Sind ..	3,009,234	2,216,178	57,222	18,166,002	23,468,636	1,429,302	62,607	4,657,391	..	31,386,845	30,211,415
Minor Areas ..	82,286	56,373	77,435	462,767	678,861	44,415	6,909	59,916	..	897,218	736,037
Total ..	77,668,882	25,451,330	7,904,783	93,479,555	204,504,550	15,333,591	2,418,863	15,221,787	3,308,718	280,040,798	227,611,132

**Rains** in January and February are generally beneficial but an excess of rainfall in these months usually produces rust with a diminution of the yield. On irrigated land 2 to 4 waterings are generally given. The crop is generally harvested in March and April and the threshing and winnowing go on up till the end of May. In good years the surplus crop is bought up at once by exporters and no time is lost in putting it on the European market as other supplies are at that time of year scarce. In years of famines the local price is generally sufficiently high to restrict exports.

**The Millets**—These constitute one of the most important group of crops in the country, supplying food for the poorer classes and fodder for the cattle. The varieties vary greatly in quality, height and suitability to various climatic and soil conditions. Perhaps the two best known varieties are Jowar (*Sorghum vulgare*) tall growing with a large open head, and Bajra with a close rat-tail head and thin stem. Generally speaking the Jowars require better land than the Bajras and the distribution of the two crops follows the quality of the soil. Neither for jowar nor bajra is manure applied and cultivation is not so thorough as for wheat, the main objective being to produce a fine seed bed. As the crop is generally sown in the beginning of the monsoon it requires to be thoroughly weeded. It is often grown mixed with the summer pulses and other crops in which case thin seedlings are resorted to. The subsidiary crops are harvested as they ripen either before the millet is harvested or afterwards. The produce is consumed in the country.

**Pulses** are commonly grown throughout India and the grain forms one of the chief foods of the people. Most kinds do well but are subject to failure or shortage of yield owing to a variety of circumstances among which rain at the time of flowering appears to be one of the most important. They are therefore more suitable to grow as mixed crops especially with cereals, and are generally grown as such. Being deep rooted and practically independent of a Nitrogen supply in the soil they withstand drought and form a good alternation in a cereal rotation. The chief crops under this heading are gram, mash, mung and moth, gram forming the main winter pulse crop while the others are grown in the summer. The pulses grow best on land which has had a good deep cultivation. A fine seed bed is not necessary. For gram especially the soil should be loose and well aerated. Indian pulses are not largely exported although they are used to some extent in Europe as food for dairy cows.

**Cotton** is one of the chief exports from India and the crop is widely grown in the drier parts of the country. The lint from Indian cotton is generally speaking short and coarse in fibre and unsuited for English mills. Japan and the Continent are the chief buyers. The crop is grown during the summer months and requires a deep moist soil and light rainfall for its proper growth. Rain immediately after sowing or during the flowering period is injurious. In parts of Central and Southern India the seed is sown in lines and the crop receives careful attention but over

Northern India it is sown broadcast (often mixed with other crops) and from the date of sowing till the time of picking is practically left to itself. The average yield, which does not amount to more than 400 lbs. per acre of seed cotton, could doubtless be greatly increased by better cultivation.

**Sugarcane**.—Although India is not naturally suited for sugarcane growing, some 3½ millions of acres are annually sown. The crop is mostly grown in the submontane tracts of Northern India. The common varieties are thin and hard, yielding a low percentage of juice of fair quality. In India white sugar is not made by the grower who simply boils down the juice and does not remove the molasses. The product called gur or gul is generally sold and consumed as such, although in some parts a certain amount of sugar-making is carried on. The profits, however, are small owing to the cheapness of imported sugar and there appears to be some danger to the crop if the present taste for gur were to die out. The question has been taken up by Government and a cane-breeding station has been recently opened near Coimbatore in Madras with the object of raising seedling canes and otherwise improving the supply of cane sets. A number of sugar factories of a modern type have been set up within recent years in Bihar and the United Provinces. The chief difficulty seems to be the obtaining of a sufficiently large supply of canes to offset the heavy capital charges of the undertakings.

**Oilseeds**.—The crops classified under this heading are chiefly sesamum, linseed and the cruciferous oilseeds (rape, mustard, etc.). Although oilseeds are subject to great fluctuation in price and the crops themselves are more or less precarious by nature—they cover an immense area.

**Linseed** requires a deep and moist soil and is thus grown chiefly in Berhal, Bihar, the United Provinces and the Central Provinces. The crop is grown for seed and not for fibre and the common varieties are of a much shorter habit of growth than those of Europe. The yield varies greatly from practically nothing up to 500 or 600 lbs. of seed per acre. The seed is mainly exported whole but a certain amount of oil pressing is done in the country.

**Sesamum** (or Gingelly) is grown mostly in Peninsular India as an autumn or winter crop. The seed is mostly exported.

**The Cruciferous Oilseeds** form an important group of crops in Northern India where they grow freely and attain a fair state of development. They are one of the most useful crops in the rotation. They occupy the land for a few months only, and owing to their dense growth leave the soil clean and in good condition after their removal. A number of varieties are grown differing from each other in habit of growth, time of ripening, and size and quality of seed. The best known are rape, toria, and sarson. The crop is generally sown in September or early October and harvested from December to February. The crop is subject to the attack of aphid (green fly) at the time of flowering and sometimes suffers considerable damage from this pest. The seed

		1908-9.		1909-10.		1910-11.		1911-12.		1912-13		1913-14.		1914-15.		
		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		
Net Area by professional survey..	..	623,135,293	624,358,714	618,581,099	618,605,938	618,927,145	619,594,406	619,392,157								
	..	82,489,268	81,189,511	80,613,076	80,851,368	82,400,281	82,622,475	82,934,743								
	..	157,636,634	157,627,145	149,904,347	149,605,179	146,386,582	147,169,102	145,427,217								
	..	113,086,521	114,665,202	115,096,758	114,813,449	115,024,887	115,586,851	115,079,507								
	..	50,153,056	45,335,412	46,948,606	54,869,245	48,760,388	52,620,492	45,897,431								
	..	218,039,911	222,911,547	223,064,601	215,981,683	224,165,602	219,191,773	227,611,132								
	..	42,486,724	41,581,436	40,895,474	40,679,142	45,538,074	46,836,019	47,193,925								
	..															
	..															
	..															
Area under Food-grains—																
Rice	..	72,800,536	78,730,642	78,524,391	76,636,887	78,752,493	76,907,895	77,669,882								
Wheat	..	21,198,764	22,709,918	24,397,699	25,025,236	23,861,185	22,685,024	25,451,330								
Barley	..	8,002,683	8,104,753	7,840,222	8,482,503	7,420,335	7,200,144	7,904,783								
Jawar	..	24,780,144	21,801,934	21,184,164	18,386,332	20,967,730	21,405,397	21,223,398								
Bajra	..	16,007,989	16,303,400	15,540,225	13,092,938	16,268,801	15,385,537	16,041,561								
Ragi	..	4,464,399	4,545,335	4,288,927	4,296,207	4,455,537	4,370,376	4,250,788								
Maize	..	6,784,224	6,857,925	6,311,627	5,591,349	6,316,089	6,166,939	6,187,729								
Gram	..	11,264,479	13,153,400	13,946,210	14,128,881	12,422,848	9,296,972	14,364,490								
Other grains and pulse	..	31,534,019	31,396,982	32,069,948	29,507,101	30,907,560	28,149,109	31,411,589								
Total Food-grains		..	196,837,237	203,664,289	195,097,434	201,372,578	191,573,393	204,504,550								
Area under other food-crops (including gardens, orchards, spices, &c.).			7,193,324	7,446,923	7,582,432	8,188,499	8,124,809	8,200,367								
Area under—																
Sugar	..	2,408,212	2,442,033	2,540,541	2,565,770	2,772,085	2,707,373	2,458,865								
Coffee	..	97,233	94,455	92,874	94,576	91,913	85,723	86,712								
Tea	..	520,487	525,729	532,703	543,565	557,856	572,106	584,379								



is very subject to injury from rain and great care has to be taken in the drying. The produce is largely exported whole, but there is a considerable amount of local oil-pressing—the cake being in demand for feeding purposes.

**Jute.**—Two varieties of the plant are cultivated as a crop, *Capularis* and *Oltorius*. Jute growing is confined almost entirely to Eastern Bengal, in the Ganges-Brahmaputra Delta. The crop requires a rich moist soil. Owing to river inundation this part of India receives a considerable alluvial deposit every year and the land is thus able to sustain this exhausting crop without manure. The crop is rather delicate when young, but once established requires no attention, and grows to a great height (10 to 11 feet). Before ripening the crop is cut and rotted in water. After about three weeks submersion the fibre is removed by washing and beating. At the present high range of prices jute may be considered to be the best paying crop in India.

**Tobacco** is grown here and there all over the country chiefly, however, in Bengal, Bihar, Bombay, Madras and Burma. Of two varieties cultivated *Nicotiana Tabacum* is by far the most common. Maximum crops are obtained on deep and moist alluvium soils and a high standard of cultivation including liberal manuring is necessary. The crop is only suited to small holdings where labour is plentiful as the attention necessary for its proper cultivation is very great. The seed is germinated in seed beds and the young plants are transplanted when a few inches high, great care being taken to shield them from the sun. The crop is very carefully weeded and hoed. It is topped after attaining a height of, say, 2 ft., and all suckers are removed. The crop ripens from February onwards and is cut just before the leaves are become brittle. By varying the degree of fermentation of the leaves different qualities of tobacco are obtained. A black tobacco is required for *Hooka* smoking and this is the

most common product but a certain amount of yellow leaf is grown for cigar making.

**Live-stock** consist mainly of cattle, buffaloes and goats, horses not being used for agricultural purposes. Sheep are of secondary importance.

For draught purposes cattle are in more general use than buffaloes especially in the drier parts of the country, but buffaloes are very largely used in the low lying rice tracts. For dairying buffaloes are perhaps more profitable than cows as they give richer milk and more of it: but they require more feeding. The poorer people depend largely on the milk of goats of which there are an enormous number throughout India. Cattle breeding is carried on mainly in the non-cultivated tracts in Central and Southern India, Southern Punjab and Rajputana, where distinct breeds with definite characters have been preserved. The best known draught breeds are Hansi, Nellore, Anritmehal, Gujrat, Malvi, and the finest milk cows are the Sahiwal (Punjab) Gir (Kathidar) and Sind. Owing, however, to the encroachment of cultivation on the grazing areas well-bred cattle are becoming scarce, and some of the breeds are threatened with extinction. Efforts to improve the quality of the cattle in the non-breeding districts by the use of selected bulls have hitherto been frustrated by the promiscuous breeding which goes on in the villages.

**Dairying.**—Though little noticed, dairying forms a very large indigenous industry throughout India. The best known products are native butter (ghee) and cheese (dahl). During recent years a considerable trade in timed butter has sprung up in Gujrat (Bombay Presidency). While pure ghee and milk can be procured in the villages, in the towns dairy products can scarcely be bought unadulterated.

## AGRICULTURAL PROGRESS.

The Agricultural Departments in India as they now exist may be said to be a creation of the last ten years. There have for a good many years past been experimental farms, under official control, in various parts of India, but they were in the past to a large extent in the hands of amateurs, and the work of the Agricultural Departments, with which all the major provinces were provided by about 1884, was in the main confined to the simplification of revenue settlement procedure and the improvement of the land records system. In 1901 the appointment of an Inspector-General of Agriculture gave the Imperial Agricultural Department for the first time an expert head, and placed the Government of India in a position to enlarge the scope of their own operations and to co-ordinate the work being done on independent lines in various provinces. At that time the staff attached to the Government of India consisted of an Agricultural Chemist and a Cytogamic Botanist, while trained Deputy Directors of Agriculture were employed only

in Madras, Bombay and the United Provinces and the Economic Botanist in Madras was the only provincial representative of the more specialised type of appointments. Within the next few years a number of new appointments were made, so that by March 1906 there were altogether 20 sanctioned agricultural posts; of these seven were Imperial, including a number of specialist appointments attached to the Agricultural Research Institute and College, the establishment of which at Pusa in Bengal was sanctioned in 1903. A great impetus was given to the development of the Agricultural Departments by the decision of the Government of India in 1905 to set apart a sum of 20 lakhs (£133,000) a year for the development of agricultural experiment, research, demonstration and instruction. Their ultimate aim, as then expressed, was the establishment of an experimental farm in each large tract of country in which the agricultural conditions are approximately homogeneous, to be supplemented by numerous small demonstration farms; the

	1908-9	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15
	Acres	Acres	Acres	Acres	Acres	Acres	Acres
<b>Area under Oilseeds—</b>							
Linseed .. .. .	1,981,826	2,116,281	2,512,022	3,763,222	3,125,967	2,263,801	2,535,432
Sesamum (til)... ..	4,232,568	4,740,082	4,211,829	4,174,341	4,164,045	4,278,865	4,478,132
Rape and Mustard .. ..	3,887,122	4,093,580	2,868,746	4,223,588	3,555,300	4,083,135	4,144,374
Other Oilseeds .. .. .	4,004,082	3,957,094	3,911,625	4,333,704	4,091,368	4,027,236	4,185,657
<b>Total Oilseeds*...</b>	<b>14,105,598</b>	<b>14,925,057</b>	<b>14,534,230</b>	<b>16,494,865</b>	<b>14,935,780</b>	<b>14,658,927</b>	<b>15,333,591</b>
<b>Area under—</b>							
Cotton .. .. .	12,038,974	13,172,188	14,447,690	14,568,189	14,138,497	15,844,383	15,221,787
Jute .. .. .	2,835,453	2,756,820	2,828,669	3,090,827	3,323,851	3,135,585	3,308,718
Other fluffs .. .. .	732,718	824,669	769,594	688,868	805,911	915,303	976,142
Indigo .. .. .	286,354	294,970	282,119	274,476	227,046	169,221	145,792
Opium .. .. .	416,318	474,268	383,335	220,164	197,314	170,503	178,582
Tobacco .. .. .	953,712	1,013,332	1,067,682	998,542	964,726	1,001,710	1,056,849
Fodder crops .. .. .	4,627,878	4,748,899	4,881,742	4,977,024	5,770,466	5,910,087	6,362,511
<b>Estimated yield* of—</b>							
Rice (cleaned) .. .. .	390,979,000	557,136,000	557,938,000	601,450,000	569,700,000	575,500,000	544,840,000
Wheat .. .. .	7,639,000	9,633,600	10,061,500	9,924,500	9,853,000	8,354,000	10,047,000
Coffee † .. .. .	27,648,357	34,983,560	263,269,400	268,602,700	297,878,100	307,249,600	312,976,200
Tea † .. .. .	247,364,750	258,136,400	3,853,000	3,288,000	4,610,000	5,066,000	5,209,000
Cotton .. .. .	3,692,000	4,218,000	7,332,000	8,234,700	9,342,800	8,893,900	10,443,900
Jute .. .. .	6,310,900	7,216,000	571,300	644,000	542,100	362,000	397,000
Linseed .. .. .	297,700	427,800	1,325,700	1,241,200	1,087,500	1,210,200	1,210,200
Rape and Mustard .. ..	987,500	1,270,200	511,800	597,800	474,000	403,500	561,000
Sesamum (til)... ..	464,200	560,800	605,700	669,900	669,900	744,800	947,700
Groundnut .. .. .	435,700	459,300	503,200	47,700	39,100	26,800	25,200
Indigo .. .. .	38,800	39,300	46,000	47,700	39,100	26,800	25,200
Cane-sugar .. .. .	1,872,900	2,127,100	2,217,800	2,451,100	2,581,600	2,291,500	2,462,000

\* The acreage of crops given in this table is for British India only, but the estimated yield includes the crops in certain of the Native States.

† The statistics of the production of tea are for calendar years; those for coffee were for calendar years before 1908-9.

‡ Return of production discontinued.

(1) The import trade in the case of Bengal, Bombay and Madras declined as compared with the previous year, while the import trade of Sind and Burma increased. (2) The export trade in the case of Bengal and Madras increased, while the decreased in the case of Bombay, Sind and Burma. (3) The total trade, imports and exports taken together, increased in the case of Bengal and Madras, while it decreased in the case of Bombay, Sind and Burma. (4)

Bengal had a larger trade than Bombay, her share was 43.8 per cent. while that of Bombay 27.9 per cent. The share of Madras and of Sind was practically the same, as in the previous year—11 per cent. and 9.5 per cent. respectively. The share of Burma was 7.8 per cent. Bengal does most of the trade with Europe, America and Australia while Bombay does the greater part of the trade with Asiatic ports and Africa

### FRONTIER TRADE.

Frontier traders carried on with adjoining foreign countries across a land frontier of approximately 6,800 miles. The value is comparatively small, being in 1915-16 about 6 per cent of the total sea-borne trade. The effect of the war is noticeable in the heavy imports of raw wool from Afghanistan which was chiefly re-exported to the United Kingdom and the United States of America. There was also a heavy decline in the trade with Persia for want of transport at Nushki. The Political Agent, Chagalais of opinion that the war has afforded an opportunity of capturing large trade with the north-east of Persia and the west of Afghanistan.

	1913-14.			1914-15.			1915-16.		
	Ex-ports Rs. (lakhs)	Im-ports Rs. (lakhs)	Total Rs. (lakhs)	Ex-ports Rs. (lakhs)	Im-ports Rs. (lakhs)	Total Rs. (lakhs)	Ex-ports Rs. (lakhs)	Im-ports Rs. (lakhs)	Total Rs. (lakhs)
N. W. Frontier—									
Afghanistan .. ..	152	1,29	2,81	1,36	1,21	2,57	1,53	1,67	3,20
Dir, Swat, and Bataui ..	87	78	1,65	90	75	1,65	86	58	1,44
Central Asia .. ..	18	12	30	15	9	24	13	11	24
Persia .. ..	22	3	25	16	3	19	9	3	12
N. and N. E. Frontier—									
Nepal .. ..	2,05	4,33	6,38	1,91	3,85	5,76	2,07	3,95	6,02
Tibet .. ..	20	33	53	18	35	53	19	38	57
Sikkim .. ..	16	31	47	16	29	45	16	27	43
Bhutan .. ..	18	21	39	18	22	40	11	16	27
Eastern Frontier									
Shan States .. ..	1,83	2,02	3,85	2,18	1,93	4,11	2,28	2,08	4,36
Western China .. ..	56	29	85	53	19	72	43	19	62
Siam .. ..	17	44	61	17	43	60	16	26	42
Karenne (North Tenasserim) .. ..	6	35	41	3	24	27	2	20	22

The principal imports across the land frontier of India are rice, oilseeds, provisions, (chiefly in the form of ghee and pickled) tea, cattle, sheep and goats, which are imported largely from Nepal; horses, ponies, and mules, chiefly from the Shan States; teak from Siam and Karenne in the eastern frontier of Burma; other timber from the north-west frontier (Firah, Dir, Swat, and Bajur and Waziristan); raw wool, mainly from Afghanistan, and Tibet; and fruits and

ture and yarn, mostly of foreign origin; the other exports, among which spices, metals, sugar, tea, and salt are the most important, are on a much smaller scale.

**Inland Trade.**—The imports and exports are each 32,530,000 tons, valued at Rs. 403 crores (£269 millions), as against 31,673,000 tons, valued at Rs. 393 crores (£262 millions) in the previous year (1914-15) and 33,751,000 tons

# Agricultural Statistics.

	1908-9.	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
under Oilseeds—							
Linsced	1,981,826	2,116,281	2,512,032	3,763,922	2,125,067	2,268,801	2,625,432
Sesamum (oil)	4,232,568	4,740,092	4,211,829	4,174,341	4,164,045	4,278,865	4,478,128
Rape and Mustard	3,887,122	4,093,590	3,898,746	4,223,598	3,555,390	4,063,135	4,144,374
Other Oilseeds..	4,004,052	3,075,094	3,911,623	4,333,704	4,091,368	4,027,236	4,185,657
Total Oilseeds..	14,105,598	14,625,057	14,534,230	16,494,865	14,935,780	14,658,027	15,333,591
under—							
Cotton	12,938,974	13,172,188	14,447,000	14,568,189	14,138,497	15,814,363	15,221,787
Jute	2,835,453	2,756,820	2,898,669	3,090,827	3,323,951	3,155,585	3,308,718
Other fibres	722,718	824,669	769,594	688,868	805,911	915,303	976,142
Indigo	286,354	294,970	282,119	274,476	227,046	169,221	145,792
Opium	416,318	374,208	383,335	220,164	197,314	170,503	178,582
Tobacco	953,712	1,013,352	1,007,682	988,943	964,725	1,001,710	1,056,849
Fodder crops	4,627,878	4,748,899	4,831,742	4,977,924	5,770,466	5,910,087	6,362,511
under yield* of—							
Rice (Cleaned)	390,979,900	557,136,000	557,938,000	601,480,000	569,700,000	575,800,000	544,840,000
Wheat	7,639,000	9,633,690	10,061,500	9,924,500	9,853,000	8,358,000	10,087,000
Coffee †	27,648,957	34,983,569	268,602,700	268,602,700	297,878,100	307,249,000	312,976,200
Tea †	247,364,750	258,136,400	3,853,000	3,288,000	4,610,000	5,066,000	5,209,000
Cotton	3,692,000	4,718,000	7,092,000	8,234,700	9,342,800	8,893,900	10,443,900
Jute	6,310,800	7,206,600	571,300	644,900	642,100	386,200	397,000
Linsced	267,700	427,800	1,325,100	1,397,600	1,241,200	1,087,500	1,210,200
Rape and Mustard	987,500	1,270,200	511,800	397,600	474,000	403,500	551,000
Sesamum (oil)..	464,300	560,400	503,200	605,700	669,900	748,800	947,700
Groundnut	495,700	459,600	46,000	77,547	39,100	26,800	25,200
Indigo	38,800	39,300	46,000	1,878	2,583,600	2,291,500	2,462,000
Cane-sugar	1,872,000	2,127,100	200	1,717			

\* The acreage of crops given in this table is for British India only.

† States.

‡ The statistics of the production of tea are for calendar years.

§ Return of production discontinued.

as the crops in certain of the Native before 1908-9.

15,476,771	15,476,771
53,200,173	53,200,173
60,879,962	60,879,962
53,808,231	53,808,231
55,077,547	55,077,547
52,594,149	52,594,149
11,874,477	11,874,477
31,305,574	31,305,574
8,572,732	8,572,732
1,770,921	1,770,921
367,660	367,660
1,012,360	1,012,360
31,846	31,846

116,950,030

## Agricultural Improvement.

creation of an agricultural college teaching up to a three years' course in each of the larger provinces; and the provision of an expert staff in connection with these colleges for purposes of research as well as education. The eventual cost, which is recognised, would largely exceed 20 lakhs. The Pusa Research Institute and College alone has cost nearly £150,000 including equipment. A part of the cost was met from a sum of £30,000 placed at Lord Curzon's disposal by Mr. Phipps, an American visitor to India. This example of munificence has recently been followed by Sir Sassoon J. David, who placed the sum of £53,300 at the disposal of the Government of Bombay for the establishment of vernacular agricultural schools and the equipment of agricultural methods, in connection with the visit of Their Imperial Highnesses to India.

There was a large trade with the Political Agency.

From 1912 there were over 40 in the Agricultural Service, Inspector-General, which was the end of the year 1911-12, the provincial departments of agriculture, under the Government, included the Director of the Service, who was also Principal of the College, a cotton specialist, two entomologists, two agricultural chemists, and an economic botanist. These were supernumerary officers, and were engaged in training. The provincial agricultural departments were in general strength. Generally speaking, each of the larger provinces has at least a Deputy-Director of Agriculture (most provinces have two), an Agricultural Chemist, and an Economic Botanist. In several provinces the principalship of the Agricultural College is a separate appointment and among the remaining officers are a fibre expert in Eastern Bengal and Assam, and a "scientific officer for planting industries in Southern India" in Madras. The Government of Madras have also a mycologist and an entomologist of their own. The posts so far referred to have hitherto necessarily been filled almost exclusively by the appointment of trained specialists from the United Kingdom. There are also in the various provinces a considerable number of locally appointed Assistant Professors (in the Agricultural Colleges), Assistant Agricultural Chemists and Entomologists, Agricultural Inspectors, Superintendents of Farms, etc., and subordinate officers. It is an essential part of the scheme adopted that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in regard to the scientific development of agricultural methods on lines suited to local conditions. Provincial agricultural colleges, which are also research stations, have within the last few years been established in Madras, Bombay, Bengal, the United Provinces, the Punjab and the Central Provinces. The Central College at Pusa is intended to provide for more advanced training, and gives also short practical courses in subjects not at present taught in the pro-

vincial colleges. The Provincial Directors of Agriculture have so far been selected from the ranks of the Indian Civil Service, and they still in some provinces have other functions besides the supervision of the Agricultural Department; but in all the larger provinces except the United Provinces the appointment of Director of Agriculture has since 1905 been separated from that of Director of Land Records.

### Machinery.

The rapid extension in India in recent years of the use of machinery in connection with agriculture and irrigation has created a demand for expert assistance to meet which Agricultural Engineers have since the end of the period under review been appointed in Bombay and the United Provinces to advise cultivators as to engines, pumps, threshing machinery, etc. An important advance in the direction of bringing the provincial agricultural departments more closely into touch with one another was made in 1905 by the creation of the Board of Agriculture. The Board, which includes the Imperial and provincial experts, meets annually to discuss the programme of agricultural work, and agricultural questions generally, and makes recommendations which are submitted to the Government of India for consideration.

### Work of the Departments.

The work of the Agricultural Department has two main aspects. On the one hand, by experiment and research, improved methods or crops are developed, or the means of combating a pest are worked out; on the other hand, ascertained improvements must be demonstrated and introduced as far as possible into the practice of the Indian cultivator. There is an essential difference between agricultural departments in the East and in the West in that, whereas the latter have arisen to meet the spontaneous demands of the cultivators of the soil, the former are entirely the creation of a government anxious to give all the assistance it can to its agricultural subjects. The demand for improved agriculture has not in India, except in special cases, come from the cultivator, and it is necessary for the Department to put forth every effort first to ascertain the needs of the cultivators and then to demonstrate how they can most effectively be met. It is only a few years since work on modern lines was commenced by the reorganised agricultural departments, and, in the first place, a great deal of spadework had to be performed.

### Cotton.

Cotton from the first received much of the attention of the new departments. Very striking results have already been achieved, and more particularly with Cambodia and other exotic varieties. The second line of improvement is the separation and selection of indigenous varieties. In Madras the efforts of the Agricultural Department have resulted in the spread of the local improved variety called *Korungany* in the Tinnevely District and white-seeded *Tellapathi* cotton in Kurrul.



both of these varieties having been selected, from among the mixtures ordinarily grown in the districts. A system of seed distribution was gradually built up, and now, after five or six years' work, there is a vast area under *Karungany*. The Department supplies pure seed to contract seed growers and buys the seed-cotton from these men, gins it, and arranges the distribution of seed through village depots. In Bombay, two have been selected as the best out of many hybrids and pure line cottons bred and tried for many years on the Surat farm. They give a distinct advantage both in quantity and quality over the ordinary local cotton, and promise to sell at rates 5 per cent. higher. In another part of the province arrangements are being made to distribute on a large scale seed of another improved form, which can be grown, it is estimated, over 1,300,000 acres. In the Southern Maratha Country, Broach cotton, introduced by the Department, is gaining favour. There is said to be scope for 250,000 acres, and the increased profit to the cultivator is estimated at £1 or more per acre. In the Central Provinces also, two indigenous varieties have been selected. In the United Provinces seed of a superior variety is being distributed. Wheat also has been the subject of prolonged experiments. One of the first results of the investigations carried out at Pusa, was the demonstration of the fact that varieties with milling and baking qualities similar to those of the best wheat on the English market could be grown to perfection in Bihar. By the application of modern methods of selection and hybridisation these high grain qualities were successfully combined with high yielding power, rust-resistance, and strong straw.

Another crop with which considerable success has been attained is **Ground-nut**, the cultivation of which had at the beginning of the decade fallen off, owing partly to the prevalence of a fungoid disease and partly to deficient rainfall. Exotic varieties with a better yield have been introduced in Bombay, and in Burma cultivation has advanced with extraordinary rapidity.

Another success of marked importance achieved by the efforts of the provincial agricultural departments is the introduction of **agricultural implements** and machinery suited to the conditions of different provinces. Information and assistance in regard to the choice of implements suitable for various conditions has, under present circumstances, to be interpreted and brought home to Indian cultivators by a more direct agency than business firms, and the agricultural departments have therefore to do a good deal of this work. They have succeeded already in introducing various kinds of implements in different parts of the country. Every assistance is given in the use and repair of implements recommended. Up to the present, the departments perform to a certain extent the functions of dealers in implements, but it is becoming difficult to control the work as the area covered by the introductions is gradually becoming large, and a need for the development of co-operative societies is felt. In Bombay, the Department has introduced ploughs of various patterns and is selling a larger number each year. In some provinces iron ploughs are becoming very popular. The possibilities of improved harrows, cultivators, and clod-crushers are also receiving attention.

## TEN YEARS' PROGRESS.

In 1915, Mr. James Mackenna, I.C.S., Director of Agriculture in Burma, published a brochure in which he reviewed the progress in Agriculture in India in the last ten years. In this, reviewing the effects of the work of the new Agricultural Departments, he said:—

The Agricultural Departments are now regarded as an integral and important part of the administration. The few European and Indian workers of 1905—158 in all—now number 866. Their labours are concentrated and co-ordinated: they now work on general schemes of development. Farms and demonstration plots, formerly scattered and disconnected, have increased from 35 to 374, and work on them is concentrated on the main problems, and not dissipated as used to be the case over a number of subsidiary and unimportant enquiries.

"As a result the Department can claim credit for a great advance in general agricultural practice. Cultural and manual problems have in many cases been solved. Local machines have been improved and adapted, or better implements introduced. Real and substantial work has been done on the improvement of such important crops as wheat, cotton, rice, sugarcane and tobacco. The general principles of

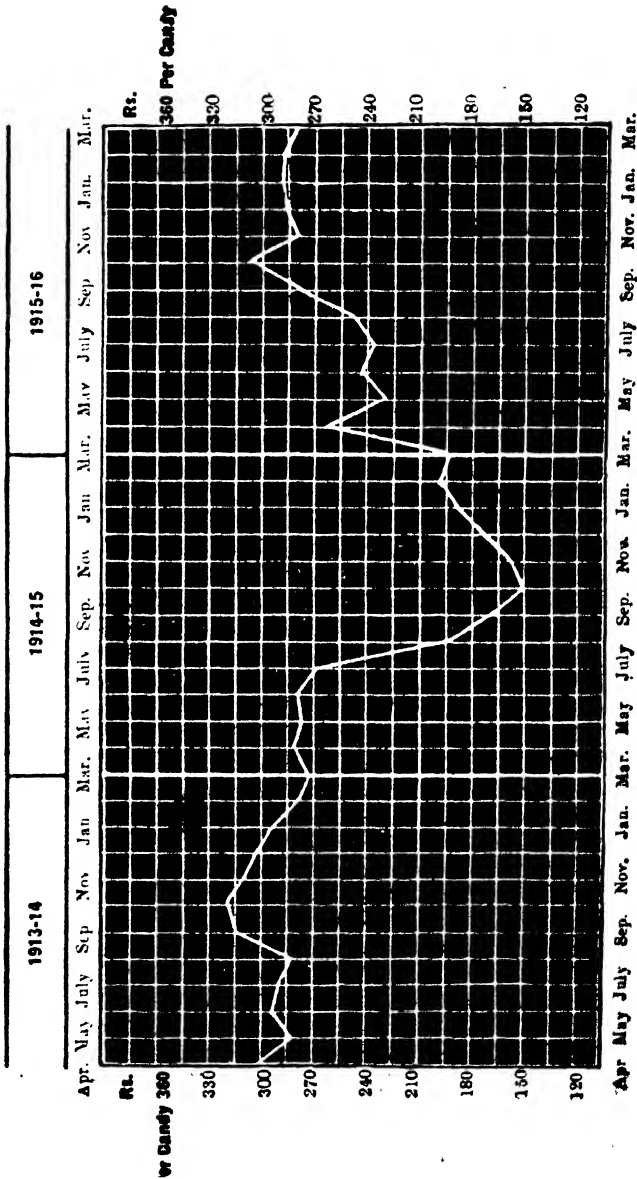
crop improvement have naturally been dealt with first; but given more men and more money all the crops of India will be taken up.

"Money spent on agriculture is a good investment, but material results are difficult to gauge. Many factors have to be considered. A whole industry threatened by destruction may be saved by the discovery and application of preventive and protective methods. The treatment of the palm industry and areca-nut industry of Madras and the protection of the potato crop of Patna are illustrations of this kind. Again, there are the direct gains following the introduction of new or improved crops, implements, well-boring and improved methods of cultivation. We may, at a conservative estimate, claim that the increase to the value of the agricultural products of India as a result of the labours of its Agricultural Departments is already about 3½ crores of rupees annually, or over £2,300,000. This is the result of only ten years' work, and it must be remembered that every year will show a progressive increase. On the debit side we have an annual expenditure on agriculture which has risen from Rs. 8,81,124 or £68,742 in 1904-05 to Rs. 51,80,652 or £42,043 in 1913-14."

# RAW COTTON

(BROACH)

(Per Candy of 734 lbs)





## AREA, UNDER IRRIGATION IN 1914-15: IN ACRES.

Administrations.	Total Area Cropped.	AREA IRRIGATED.			
		By Canals.		By Tanks.	By Wells
		Government.	Private.		
Bengal .. ..	29,639,600	107,045	161,432	990,258	16,385
Madras .. ..	89,090,541	8,444,227	235,319	3,622,529	1,572,205
Bombay .. { Presidency ..	20,463,301	177,802	19,250	135,070	516,421
.. { Sind ..	4,923,544	8,193,994	90,497	....	23,850
United Pro- { Agra ..	32,575,043	2,614,728	80,702	63,286	4,254,211
vinces. { Oudh ..	11,947,505	....	....	....	1,999,419
Bihar and Orissa ..	31,646,800	994,490	606,194	1,309,281	633,066
Punjab .. ..	31,715,882	7,593,025	528,996	8,246	3,213,451
Burma .. { Upper ..	5,638,076	473,649	195,848	194,828	13,346
.. { Lower ..	9,280,160	297	20,376	2,780	2,472
Central Provinces ..	20,219,877	17,779	5,865	581,807	64,459
Berar .. ..	7,047,455	....	....	427	32,176
Assam .. ..	6,414,008	978	134,826	....	....
North-West Frontier Pro- vince.	3,141,785	245,983	467,844	....	97,409
Ajmer-Merwara ..	425,650	....	....	33,911	84,216
Delhi .. ..	324,411	21,209	....	328	13,006
Coorg .. ..	139,689	2,243	....	1,555	....
Manpur Fargana ..	7,468	....	....	....	139
Total ..	200,640,798	18,837,455	2,496,649	6,943,825	12,556,291

Administrations.	AREA IRRIGATED.		CROPS IRRIGATED.*			
	Other Sources.	Total Area Irrigated.	Wheat.	Other Cereals and Pulses.	Miscel- laneous Food Crops.	Other Crops.
Bengal .. ..	1,048,739	2,323,859	19,755	1,431,132	783,126	308,790
Madras .. ..	865,274	9,789,554	4,825	9,611,112	1,236,654	429,480
Bombay .. { Presidency ..	99,719	948,262	187,096	530,011	162,130	168,021
.. { Sind ..	379,437	8,687,778	562,656	2,027,192	55,263	853,136
United Pro- { Agra ..	1,325,197	6,288,124	2,723,940	4,433,871	202,360	1,661,522
vinces. { Oudh ..	830,606	2,819,985	1,313,294	1,322,792	66,807	252,893
Bihar and Orissa ..	1,058,635	4,601,672	374,442	3,449,096	542,218	168,329
Punjab .. ..	151,508	11,495,226	4,576,068	2,874,185	454,592	3,884,760
Burma .. { Upper ..	121,091	998,762	19	990,061	36,875	33
.. { Lower ..	108,542	134,286	..	121,109	13,374	2
Central Provinces ..	31,721	720,631	37,689	618,226	60,265	4,451
Berar .. ..	737	33,330	9,253	758	20,951	2,368
Assam .. ..	211,711	347,613	20	332,733	14,097	665
North-West Frontier Pro- vince.	86,939	898,235	238,215	441,615	52,057	122,725
Ajmer-Merwara ..	99	118,226	8,387	69,654	16,301	32,440
Delhi .. ..	..	84,543	10,246	5,599	11,153	7,545
Coorg .. ..	..	3,798	..	8,798	..	..
Manpur Fargana ..	..	139	103	35	1	..
Total ..	6,309,705	47,193,925	10,118,908	23,862,959	3,729,224	7,997,149

\* Includes the area irrigated at both harvests.

**CROPS UNDER CULTIVATION IN 1914-15: IN ACRES.**

Administrations.	Rice.	Wheat.	Barley.	Jawar or Cholum (Grat Millet).	Bajra or Cumbu (Spiked Millet).	Ragi or Marua (Millet).
Bengal .. .. .	20,449,900	134,100	94,600	2,300	6,100	11,000
Madras .. .. .	10,875,909	18,272	2,990	5,101,660	3,482,064	2,432,370
Bombay { Presidency ..	1,901,086	1,570,322	23,032	6,663,824	5,238,701	654,366
{ Sind .. .. .	1,108,148	605,850	31,190	638,483	1,089,611	846
United Pro- { Agra .. .. .	4,003,411	5,221,433	3,467,225	2,055,577	2,266,930	166,052
vinces .. { Oudh .. .. .	2,196,225	2,137,003	1,160,562	357,018	502,879	59,274
Bihar and Orissa ..	15,948,100	1,253,700	1,303,000	104,100	73,200	887,700
Punjab .. .. .	794,277	9,915,507	1,308,474	1,275,040	2,737,932	17,452
Burma { Upper .. .. .	2,190,123	30,137	..	498,417	172,157	..
{ Lower .. .. .	8,404,320	..	..	13	5	..
Central Provinces ..	4,893,481	2,915,639	11,295	2,007,343	38,804	15,694
Berar .. .. .	25,677	349,580	62	2,292,071	100,084	14
Assam .. .. .	4,752,840	2	25	..	..	1,920
North-West Frontier Pro- vince .. .. .	43,099	1,182,806	421,893	120,418	239,472	..
Ajmer-Merwara .. ..	235	18,627	62,909	76,911	38,973	60
Delhi .. .. .	77	36,306	14,520	26,751	54,636	..
Coorg .. .. .	81,895	..	..	..	..	3,440
Manpur Pargana .. ..	79	1,440	..	2,863	7	..
<b>TOTAL .. .. .</b>	<b>77,668,882</b>	<b>25,451,330</b>	<b>7,904,783</b>	<b>21,223,398</b>	<b>10,041,501</b>	<b>4,250,788</b>

Administrations.	Maize.	Gram (pulse).	Other Food Grains and Pulses.	Total Food Grains and pulses	Lin- seed.	Sesamum (Til or JinJili).
Bengal .. .. .	95,500	182,400	1,352,600	22,329,100	188,700	281,500
Madras .. .. .	153,855	134,474	8,188,526	30,390,120	16,342	861,082
Bombay { Presidency ..	156,420	504,920	2,810,339	19,526,010	118,290	262,379
{ Sind .. .. .	1,461	110,607	296,424	3,942,626	10	80,857
United Pro- { Agra .. .. .	1,453,110	4,069,594	4,549,598	27,252,936	175,153	337,115
vinces .. { Oudh .. .. .	926,278	1,273,264	2,374,701	10,987,804	79,238	33,607
Bihar and Orissa ..	1,515,100	1,361,200	4,672,800	27,118,900	660,500	209,400
Punjab .. .. .	1,046,701	5,193,292	1,674,865	23,964,149	49,161	223,347
Burma { Upper .. .. .	149,526	45,445	94,885	3,180,690	..	1,139,042
{ Lower .. .. .	21,121	2,276	5	8,427,740	..	73,896
Central Provinces ..	154,739	1,018,474	4,468,101	15,523,570	1,170,256	843,992
Berar .. .. .	1,321	142,728	643,066	3,554,603	51,533	81,742
Assam .. .. .	18,683	..	92,037	4,865,507	11,767	8,150
North-West Frontier Pro- vince .. .. .	418,838	203,268	132,140	2,761,934	81	6,674
Ajmer-Merwara .. ..	71,480	21,471	27,148	317,814	1,193	34,710
Delhi .. .. .	2,650	100,304	32,834	268,084	3,155	15
Coorg .. .. .	..	229	1,413	86,977	..	335
Manpur Pargana .. ..	946	544	107	5,986	103	305
<b>TOTAL .. .. .</b>	<b>6,187,729</b>	<b>14,364,490</b>	<b>31,411,589</b>	<b>204,504,550</b>	<b>2,525,432</b>	<b>4,478,123</b>

\* Included under "Other Food Grains and Pulses."

## CROPS UNDER CULTIVATION IN 1914-15: IN ACRES.

Administrations.	Rape and Mustard.	Groundnut.	Other Oil Seeds.	Total Oil Seeds.	Condiments and Spices.	Sugar Cane.	Sugar Other.
Bengal .. ..	1,315,600	..	42,500	1,828,300	169,000	233,400	56,700
Madras .. ..	..	1,866,360	644,088	3,388,452	613,332	74,463	73,064
Bombay { Presi-	8,107	222,040	320,522	931,344	165,472	..	..
dency .. ..	..	..	..	..	..	56,467	863
Sind .. ..	416,292	26	773	497,958	8,175	3,153	2,124
United { Agra ..	117,907	2,027	24,281	656,483	80,187	978,891	..
Provin-	..	..	..	..	..	..	..
ces. { Oudh ..	72,424	4,526	565	190,360	12,312	215,463	..
Bihar and Orissa ..	692,400	2,000	284,300	1,818,000	76,400	205,500	200
Punjab .. ..	1,046,540	..	4,518	1,323,566	27,744	366,056	..
Burma.. { Upper	288	265,364	(a) 151	1,404,818	58,309	2,851	22,025
Lower.	3,552	7,952	(a) 262	85,662	19,076	12,508	806
Central Province ..	46,783	3,686	414,158	2,478,875	52,005	16,419	..
Berar .. ..	1,422	2,653	66,868	204,218	21,739	1,004	..
Assam .. ..	309,810	..	136	320,863	2,633	38,106	..
North-West Frontier Province	113,810	..	132	129,647	3,660	31,740	..
Ajmer-Merwara ..	..	..	2,170	38,073	2,587	181	4
Delhi .. ..	28	..	2,130	5,328	1,221	6,096	..
Coorg .. ..	11	..	8	354	3,577	19	..
Manpur Pargana ..	..	..	252	660	..	9	..
Total .. ..	4,144,374	2,377,240	1,808,417	15,333,591	1,323,420	2,302,989	155,876

Administrations.	Cotton.	Jute.	Other Fibres.	Total Fibres.	Indigo.	Other Dyes.
Bengal .. ..	68,100	2,872,000	42,400	2,983,100	1,300	..
Madras .. ..	2,087,442	..	338,622	2,426,064	71,083	2,774
Bombay { Pre-	4,320,104	..	161,907	4,491,101	59	438,032
sidency .. ..	..	..	..	..	..	..
Sind .. ..	328,197	..	627	328,824	1,342	691
United { Agra ..	1,439,152	..	135,388	1,574,540	11,668	461
Provin-	..	..	..	..	..	..
ces. { Oudh ..	92,080	..	35,694	128,674	632	38
Bihar and Orissa ..	70,300	331,000	30,700	432,000	38,500	9,200
Punjab .. ..	1,687,763	..	52,080	1,739,843	20,193	4,642
Burma.. { Upper	261,742	..	201	261,943	383	..
Lower .. ..	31,371	..	521	31,892	..	..
Central Provinces ..	1,491,784	..	120,558	1,612,342	14	47
Berar .. ..	3,180,264	..	55,462	3,235,726	4	..
Assam .. ..	32,818	105,118	261	138,197	..	..
North-West Frontier Province.	60,764	..	884	61,648	11	39
Ajmer-Merwara ..	53,816	..	30	53,846	3	..
Delhi .. ..	5,378	..	586	5,964	..	..
Coorg .. ..	3	..	155	158	..	..
Manpur Pargana ..	719	..	66	785	..	..
Total .. ..	15,221,787	3,308,718	976,142	19,506,647	145,792	455,324

(a) Includes Blacod.

**CROPS UNDER CULTIVATION IN 1914-15: IN ACRES.**

Administrations.	Opium.	Tea.	Coffee.	Tobacco.	Other Drugs and Nar- cotics.	Fodder Crops.
Bengal .. .. .	..	159,100	..	322,700	4,200	126,500
Madras .. .. .	..	27,060	41,085	227,182	60,462	309,404
Bombay .. .. .	..	21	52	88,467	27,898	112,633
{ Presidency	..	..	..	..	..	..
{ Sind .. .. .	..	..	..	9,045	157	16,127
{ Agra .. .. .	91,912	8,084	..	85,159	2,019	1,107,182
United Pro- vinces .. .. .	..	84,579	..	17,621	1,214	161,883
Bihar and Ori- ssa .. .. .	..	2,200	..	105,500	..	39,300
Punjab .. .. .	1,891	9,850	..	63,887	1,730	3,899,108
{ Upper	200	1,785	75	32,539	2,744	52,462
Burma .. .. .	..	..	..	..	..	..
{ Lower	..	..	..	56,522	39,225	1,937
Central Provinces ..	..	..	..	15,935	102	419,822
Berar .. .. .	..	..	..	13,318	..	545
Assam .. .. .	..	376,179	1	9,512	..	117
North-West Frontier Pro- vince .. .. .	..	..	..	7,314	11	82,015
Ajmer-Merwara .. ..	..	..	..	25	..	1,728
Delhi .. .. .	..	..	..	712	..	31,153
Coorg .. .. .	..	100	42,495	11	237	..
Manpur Pargana .. ..	..	..	..	..	..	..
<b>Total</b> .. .. .	<b>178,582</b>	<b>581,379</b>	<b>86,712</b>	<b>1,056,349</b>	<b>140,089</b>	<b>6,362,511</b>

Administrations	Fruits and Vegetab- les, including Root Crops.	Miscellaneous Crops.		Total Area Cropped.	Deduct Area Cropped more than once.	Net Area Cropped.
		Food.	Non- Food.			
Bengal .. .. .	786,400	324,600	315,200	29,639,600	4,431,500	25,208,109
Madras .. .. .	1,209,227	..	173,172	39,090,541	4,398,756	34,691,788
Bombay .. .. .	620,711	1,930	2,211	26,463,301	752,145	25,711,156
{ Presidency	..	..	..	..	..	..
{ Sind .. .. .	41,919	80	70,423	4,023,544	423,285	4,500,259
{ Agra .. .. .	346,706	22,814	7,848	632,575,043	5,097,759	20,877,284
United Pro- vinces .. .. .	..	..	..	..	..	..
{ Oudh .. .. .	143,840	2,922	163	11,947,505	2,657,492	9,290,013
Bihar and Ori- ssa .. .. .	916,800	478,000	315,700	31,646,800	5,619,500	26,027,300
Punjab .. .. .	211,213	58,688	1,927	31,715,882	5,133,638	26,582,244
{ Upper	611,976	..	5,243	5,638,076	515,791	5,122,285
Burma .. .. .	..	..	..	..	..	..
{ Lower	461,669	..	143,029	9,280,160	39,441	9,240,719
Central Provinces ..	98,043	2,050	563	20,219,877	2,128,509	18,091,368
Berar .. .. .	14,709	1,373	216	7,047,455	29,648	7,020,807
Assam .. .. .	407,525	(a)	118,308	(c) 5,414,008	525,138	5,888,870
North-West Frontier Pro- vince .. .. .	20,861	44,524	781	3,441,785	518,883	2,922,902
Ajmer-Merwara .. ..	502	9,096	1,791	425,650	51,415	374,235
Delhi .. .. .	4,750	241	262	324,411	108,416	215,995
Coorg .. .. .	5,761	..	..	139,689	998	138,691
Manpur Pargana .. ..	8	(a)	20	7,468	352	7,116
<b>Total</b> .. .. .	<b>5,930,620</b>	<b>946,318</b>	<b>1,156,887</b>	<b>260,640,798</b>	<b>33,029,666</b>	<b>227,611,132</b>

(a) Included under non-food crops.

(b) Includes 341,153 acres for which details are not available.

(c) " 128,000 " " " "

The following is a summary of the various crop forecasts relating to the season 1916-17 issued by the Department of Statistics, India.

Crop.	Tracts comprised in the figures and percentage of total Indian crop represented by them.	Estimated Area.	Per cent. of preceding year (100 = final figure of preceding year).	Estimated outturn.
Sugarcane	U. P., Punjab, Bihar and Orissa, Bengal, Madras, Bombay and Sind,* Assam, N. W. F. Province, and C. P. and Berar. (99 per cent. of total sugarcane area of British India.)	Acres. 2,354,000	Per cent. 99	....
Sesamum	U. P., C. P. and Berar, Madras, Bombay and Sind,* Bengal, Bihar and Orissa, Punjab and Ajmer-Merwara. (78 per cent. of total sesamum area of British India.)	3,152,000	61†	....
Cotton	All cotton-growing tracts..	20,702,000	115	4,515,000 bales.
Indigo	All Indigo-growing tracts	756,400	214	95,500 cwts
Rice	Bengal, Bihar and Orissa, Madras, Burma, U. P., C. P. and Berar, Bombay and Sind* and Assam. (99 per cent. of total rice area of British India.)	75,281,000	99	....
Groundnut	Madras, Bombay* and Burma. (99 per cent. of total groundnut area of British India.)	2,109,000	109	....

\* Including Natives States.

† The percentage is 99 for sesamum, if compared with the estimates at the corresponding dates of last year.

## THE CIVIL VETERINARY DEPARTMENT.

To the Civil Veterinary Department, which originated in 1892 as an expansion of the military horse-breeding department, is entrusted the performance or supervision of all official veterinary work in India, other than that of the Army. Its duties fall under the main heads of cattle disease and cattle breeding, horse and mule breeding, and educational work in veterinary colleges.

In 1905 and the following years both the superior and the subordinate establishments were considerably increased; but the strength of the subordinate staff in most provinces was still

far short of the sanctioned establishment, the demand for veterinary graduates being greater than the supply, and the European staff remained small in proportion to the volume of work calling for attention. The post of Inspector-General, Civil Veterinary Department, was abolished with effect from the 1st April 1912, the duties being transferred partly to local Governments and partly to the Agricultural Adviser to the Government of India. Of late years small veterinary departments, modelled on the Civil Veterinary Department, were started in several native states.

# Meteorology.

The meteorology of India like that of other countries is largely a result of its geographical position. The great land area of Asia to the northward and the enormous sea expanse of the Indian Ocean to the southward are the determining factors in settling its principal meteorological features. When the Northern Hemisphere is turned away from the sun, in the northern winter, Central Asia becomes an area of intense cold. The meteorological conditions of the temperate zone are pushed southward and we have over the northern provinces of India the westerly winds and eastward moving cyclonic storms of temperate regions, while, when the Northern Hemisphere is turned towards the sun, Southern Asia becomes a super-heated region drawing towards it an immense current of air which carries with it the enormous volume of water vapour which it has picked up in the course of its long passage over the wide expanse of the Indian Ocean, so that at one season of the year parts of India are deluged with rain and at another persistent dry weather prevails.

**Monsoons.**—The all-important fact in the meteorology of India is the alternation of the seasons known as the summer and winter monsoons. During the winter monsoon the winds are of continental origin and hence, dry, fine weather, clear skies, low humidity and little air movement are the characteristic features of this season. The summer rains cease in the provinces of the North-West Frontier Province and the Punjab about the middle of September after which cool westerly and northerly winds set in over that area and the weather becomes fresh and pleasant. These fine weather conditions extend slowly eastward and southward so that by the middle of October, they embrace all parts of the country except the southern half of the Peninsula, and by the end of the year have extended to the whole of the Indian land and sea area, the rains withdrawing to the Equatorial Belt. Thus the characteristics of the cold weather from October to February over India are:—Westerly winds of the temperate zone over the extreme north of India; to the south of these the north-east winds of the winter monsoon or perhaps more properly the north-east Trades and a gradually extending area of fine weather which, as the season progresses, finally embraces the whole Indian land and sea area. Two exceptions to these fine weather conditions exist during this period, viz., the Madras coast and the north-west of India. In the former region the north-east winds which set in over the Bay of Bengal in October coalesce with the damp winds of the retreating summer monsoon, which current curves round over the Bay of Bengal, and, blowing directly on to the Madras coast gives to that region the wettest and most disturbed weather of the whole year, for while the total rainfall for the four months June to September, i.e., the summer monsoon, at the Madras Observatory amounts to 15.36 inches the total rainfall for the three months October to December amounts to 29.48 inches. The other region in which the weather is unsettled, during this period of generally settled conditions, is North-west India. This region during January, February and part of March is traversed by

a succession of shallow storms from the westward. The number and character of the storms vary very largely from year to year and in some years no storms at all are recorded. In normal years, however, in Northern India periods of fine weather alternate with periods of disturbed weather (occurring during the passage of these storms) and light to moderate and even heavy rain occurs. In the case of Peshawar the total rainfall for the four months December to March, amounts to 5.26 inches while the total fall for the four months, June to September, is 4.78 inches, showing that the rainfall of the winter is, absolutely, great in this region than that of the summer monsoon. These two periods of subsidiary "rains" are of the greatest economic importance. The fall in Madras is, as shown above, of considerable amount, while that of North-west India though small in absolute amount is of the greatest consequence as on it largely depend the grain and wheat crops of Northern India.

**Spring Months.**—March to May and part of June form a period of rapid continuous increase of temperature and decrease of barometric pressure throughout India. During this period there occurs a steady transference northward of the area of greatest heat. In March the maximum temperatures, slightly exceeding 100°, occur in the Deccan; in April the area of maximum temperature, between 100° and 105°, lies over the south of the Central Provinces and Gujarat; in May maximum temperatures, varying between 105° and 110° prevail over the greater part of the interior of the country while in June the highest maximum temperatures exceeding 110° occur in the Indus Valley near Jacobabad. Temperatures exceeding 120° have been recorded over a wide area including Sind, Rajputana, the West and South Punjab and the west of the United Provinces, but the highest temperature hitherto recorded is 126° registered at Jacobabad on June 12th, 1897. During this period of rising temperature and diminishing barometric pressure, great alterations take place in the air movements over India, including the disappearance of the north-east wind of the winter monsoon, and the air circulation over India and its adjacent seas, becomes a local circulation, characterised by strong hot winds down the river valleys of Northern India and increasing land and sea winds in the coast regions. These land and sea winds, as they become stronger and more extensive, initiate large contrasts of temperature and humidity which result in the production of violent local storms. These take the forms of dust storms in the dry plains of Northern India and of thunder and hailstorms in regions where there is interaction between damp sea winds and dry winds from the interior. These storms are frequently accompanied with winds of excessive force, heavy hail and torrential rain and are on that account very destructive.

By the time the area of greatest heat has been established over north-west India, in the last week of May or first of June, India has become the seat of low barometric pressure relatively to the adjacent seas and the whole character of the weather changes. During

## Meteorology.

the hot weather period, discussed above, the winds and weather are mainly determined by local conditions. Between the Equator and Lat.  $80^{\circ}$  or  $35^{\circ}$  south the wind circulation is that of the south-east trades, that is to say from about Lat.  $30^{\circ}$ - $35^{\circ}$  south a wind from south-east blows over the surface of the sea up to about the equator. Here the air rises into the upper strata to flow back again at a considerable elevation to the Southern Tropic or beyond. To the north of this circulation, i.e., between the Equator and Lat.  $20^{\circ}$  to  $25^{\circ}$  North, there exists a light unsteady circulation, the remains of the north-east trades, that is to say about Lat.  $20^{\circ}$  North there is a north-east wind which blows southward till it reaches the thermal equator where side by side with the south-east Trades mentioned above, the air rises into the upper strata of the atmosphere. Still further to the northward and in the immediate neighbourhood of land there are the circulations due to the land and sea breezes which are attributable to the difference in the heating effect of the sun's rays over land and sea. It is now necessary to trace the changes which occur and lead up to the establishment of the south-west monsoon period. The sun at this time is progressing slowly northward towards the northern Tropic. Hence the thermal equator is also progressing northward and with it the area of ascent of the south-east trades circulation. Thus the south-east trade winds cross the equator and advance further and further northward, as the thermal equator and area of ascent follows the sun in its northern progress. At the same time the temperature over India increases rapidly and barometric pressure diminishes, owing to the air rising and being transferred to neighbouring cooler regions—more especially the sea areas. Thus we have the southern Trades circulation extending northward and the local land and sea circulation extending southward until about the beginning of June the light unsteady interfering circulation over the Arabian Sea finally breaks up, the immense circulation of the south-east Trades, with its cool, moisture laden winds rushes forward, becomes linked on to the local circulation proceeding between the Indian land area and the adjacent seas and India is invaded by oceanic conditions—the south-west monsoon proper. This is the most important season of the year as upon it depends the prosperity of at least five-sixths of the people of India.

When this current is fully established a continuous air movement extends over the Indian Ocean, the Indian seas and the Indian land area from Lat.  $30^{\circ}$  S. to Lat.  $30^{\circ}$  N. the southern half being the south-east trades and the northern half the south-west monsoon. The most important fact about it is that it is a continuous horizontal air movement passing over an extensive oceanic area where steady evaporation is constantly in progress so that where the current enters the Indian seas and flows over the Indian land it is highly charged with aqueous vapours.

The Current enters the Indian seas quite at the commencement of June and in the course of the succeeding two weeks spreads over the Arabian Sea and Bay of Bengal up to the

extreme northern limits. It advances over India from these two seas. The Arabian sea current blows on to the west coast and sweeping over the Western Ghats prevails more or less exclusively over the Peninsula, Central India, Rajputana and north Bombay. The Bay of Bengal current blows directly up the Bay. One portion is directed towards Burma, East Bengal and Assam while another portion curves to south at the head of the Bay and over Bengal, and then meeting with the barrier of the Himalayas curves still further and blows as a south-easterly and easterly wind right up the Gangetic plain. The south-west monsoon continues for three and a half to four months, viz., from the beginning of June to the middle or end of September. During its prevalence more or less general though far from continuous rain prevails throughout India the principal features of the rainfall distribution being as follows. The greater portion of the Arabian Sea current, the total volume of which is probably three times as great as that of the Bengal current, blows directly on to the west coast districts, here it meets an almost continuous hill range, is forced into ascent and gives heavy rain alike to the coast districts and to the hilly range, the total averaging about 100 inches most of which falls in four months. The current after parting with most of its moisture advances across the Peninsula giving occasional uncertain rain to the Deccan and passes out into the Bay where it coalesces with the local current. The northern portion of the current blowing across the Gujarat, Kathiawar and Sind coasts gives a certain amount of rain to the coast districts and frequent showers to the Aravalli Hill range but very little to Western Rajputana, and passing onward gives moderate to heavy rain in the Eastern Punjab, Eastern Rajputana and the North-west Himalayas. In this region the current meets and mixes with the monsoon current from the Bay.

The monsoon current over the southern half of the Bay of Bengal blows from south-west and is thus directed towards the Tenasserim hills and up the valley of the Irrawady to which it gives very heavy to heavy rain. That portion of this current which advances sufficiently far northward to blow over Bengal and Assam gives very heavy rain to the low-lying districts of East Bengal and immediately thereafter coming under the influence of the Assam Hills is forced upwards and gives excessive rain (perhaps the heaviest in the world) to the southern face of these hills. The remaining portion of the Bay current advances from the southward over Bengal, is then deflected westward by the barrier of the Himalayas and gives general rain over the Gangetic plain and almost daily rain over the lower ranges of the Himalayas from Sikhim to Kashmir.

To the south of this easterly wind of the Bay current and to the north of the westerly wind of the Arabian Sea current there exists a debatable area running roughly from Hissar in the Punjab through Agra, Allahabad and part of Chota Nagpur to Orissa, where neither current of the monsoon prevails. In this area the rainfall is uncertain and would probably

bolight, but that the storms from the Bay of Bengal exhibit a marked tendency to advance along this track and to give it heavy falls of occasional rain.

**The Total Rainfall** of the monsoon period (June to September) is 100 inches over part of the west coast, the amount diminishes eastward, is below 20 inches over a large part of the centre and east of the Peninsula and is only 5 inches in South Madras; it is over 100 inches on the Tenasserim and South Burma coast and decreases to 20 inches in Upper Burma; it is over 100 in the north Assam Valley and diminishes steadily westward and is only 5 inches in the Indus Valley.

The month to month distribution for the whole of India is:—

May	..	..	2·60 inches
June	..	..	7·10 "
July	..	..	11·25 "
August	..	..	9·52 "
September	..	..	6·78 "
October	..	..	3·15 "

Cyclonic storms and cyclones are an almost invariable feature of the monsoon period. In the Arabian Sea they ordinarily form at the commencement and end of the season, viz. May and November, but in the Bay they form a constantly recurring feature of the monsoon season. The following gives the total number of storms recorded during the period 1877 to 1901 and shows the monthly distribution:—

	Jan.	Feb.	Mar.	Apr.	May	June
Bay of Bengal	..	..	1	4	13	28
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Bay of Bengal	41	36	45	34	22	8
	Jan.	Feb.	Mar.	Apr.	May	June
Arabian Sea	..	..	..	2	15	

	July	Aug.	Sep.	Oct.	Nov.	Dec.
Arabian Sea	2	..	1	1	5	.

The preceding paragraphs give an account of the normal procession of the seasons throughout India during the year, but it must be remembered, that every year produces variations from the normal, and that in some years these variations are very large. This is more particularly the case with the discontinuous element rainfall. The most important variations in this element which may occur are:—

- (1) Delay in the commencement of the rain over a large part of the country, the being most frequent in North Bombay and North-west India.
- (2) A prolonged break in July or August or both.
- (3) Early termination of the rains, which may occur in any part of the country.
- (4) The determination throughout the monsoon period of more rain than usual to one part and less than usual to another part of the country. Examples of this occur every year.

About the middle of September fine and fresh weather begins to appear in the extreme north-west of India. This area of fine weather and dry winds extends eastward and southward the area of rainy weather at the same time contracting till by the end of October the rainy area has retreated to Madras and the south of the Peninsula and by the end of December has disappeared from the Indian region, fine clear weather prevailing throughout. This procession with the numerous variations and modifications which are inseparable from meteorological conditions repeats itself year after year.

(For monsoon of 1916, see page 304)



Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Eleva- tion in feet	Jan	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann- ual Mean.
<b>HILL STATIONS.</b>														
*Shillong	4,920	49.5	51.8	60.4	65.2	66.6	68.8	70.0	69.2	68.4	63.1	56.5	50.7	61.7
Terjooling	7,876	40.1	41.6	49.7	56.2	58.3	59.9	61.5	60.9	59.4	55.2	47.8	41.8	52.7
Simla	7,224	38.8	40.6	51.5	59.3	66.0	66.9	64.3	62.8	60.9	56.7	50.1	43.4	55.1
Murree	6,333	40.5	41.1	51.1	61.2	68.3	72.3	69.4	67.2	65.0	61.3	52.8	45.0	58.0
*Shimla	5,204	30.7	33.0	45.1	53.7	63.9	69.9	73.0	70.8	64.0	53.2	44.0	36.3	53.3
Bhadrachalam	3,945	58.2	61.0	69.9	78.0	79.8	74.9	63.8	67.6	69.6	71.6	65.2	59.9	68.8
*Ootacamund	7,327	54.0	55.5	58.6	61.5	61.3	58.2	56.9	57.4	57.3	57.2	55.4	54.3	57.3
*Kodaikanal	7,683	53.0	56.7	59.6	61.5	61.3	59.4	57.6	57.3	57.3	56.9	54.9	53.0	57.8
<b>COAST STATIONS.</b>														
Karachi	49	65.3	68.4	75.0	80.6	84.7	86.8	84.3	82.4	82.0	80.0	74.0	67.4	77.6
Veraval	18	69.4	70.2	74.0	79.1	81.5	82.5	80.0	79.1	79.0	79.5	77.2	72.3	77.0
Bombay	37	74.5	74.8	78.0	82.1	84.6	82.4	79.5	79.4	79.4	80.7	79.3	76.4	79.3
Ratnagiri	110	76.2	76.0	78.5	82.8	84.5	80.7	78.3	78.4	78.2	79.8	79.5	77.6	79.2
Mangalore	65	78.2	79.3	81.1	83.9	83.5	78.8	77.1	77.3	77.6	78.9	79.8	79.6	79.6
Calicut	27	77.8	79.8	81.6	83.6	83.1	78.5	76.7	77.4	78.3	79.1	79.5	78.3	7.59
Nagapatam.	31	75.5	77.4	80.5	84.8	87.7	87.0	85.6	84.4	83.4	80.9	78.3	76.0	81.8
Madras	22	75.3	76.6	79.5	84.1	88.7	88.4	85.7	84.5	83.9	80.8	77.9	75.7	81.8
Madulipatam	15	73.6	76.7	80.3	85.2	89.8	87.8	83.9	82.4	83.0	81.2	77.4	74.0	81.4
Gopalpur	21	70.9	74.8	78.3	81.6	84.1	83.7	81.8	82.0	82.2	79.6	74.3	69.8	78.6
Rangoon	57	74.7	77.3	81.2	85.0	82.2	79.5	78.8	78.7	79.1	80.0	78.3	75.6	79.2

\* As the average mean figures for Shillong, Ootacamund and Kodaikanal are not available, means of normal maximum and minimum temperatures uncorrected for diurnal variation are given.

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
<b>STATIONS ON THE PLAINS.</b>														
Toungoo	183	70.0	74.7	81.9	86.7	85.3	81.3	80.1	80.1	81.3	81.4	77.4	71.6	73.3
Mandalay	250	68.8	73.8	82.1	89.2	88.5	85.4	85.2	84.7	83.5	82.5	75.9	69.5	80.8
Silchar	104	63.8	67.0	73.9	78.0	80.1	81.4	82.6	82.4	81.7	79.7	73.1	66.1	75.9
Calcutta	21	65.7	70.3	73.3	85.0	85.7	84.5	83.0	82.4	82.6	80.0	72.4	65.3	77.9
Bardwan	99	65.2	70.0	80.4	86.7	86.5	84.9	83.6	82.8	83.1	80.7	73.0	66.3	78.6
Patna	183	60.8	65.3	76.9	86.2	88.0	86.4	83.5	83.1	83.3	79.5	70.1	62.2	77.1
Benares	207	60.0	65.3	76.6	86.8	91.3	89.4	84.1	83.1	83.0	77.3	67.8	60.2	77.2
Allahabad	309	59.5	64.9	76.8	87.6	92.5	90.8	84.5	83.2	83.0	77.6	67.5	59.8	77.3
Lucknow	308	58.7	63.7	75.2	89.4	90.8	88.4	85.3	83.4	83.2	77.1	66.3	58.9	76.6
Agra	555	60.1	64.8	76.7	88.1	91.0	89.4	86.0	84.2	84.2	79.4	68.7	61.2	78.4
Meerut	738	56.0	60.1	71.1	82.7	88.4	89.4	85.0	83.2	81.7	74.7	63.5	56.7	74.4
Delhi	718	57.9	62.2	74.1	86.2	91.7	92.2	86.4	84.5	83.9	78.5	67.6	59.6	77.1
Lahore	702	53.0	57.3	69.0	80.9	88.9	93.0	89.1	87.1	84.8	75.7	63.2	54.6	74.7
Multan	420	55.6	53.8	71.6	82.9	91.4	94.9	92.7	90.4	88.0	78.6	67.1	57.7	77.5
Jacoba bad	186	57.8	62.4	74.5	85.5	94.2	97.7	95.0	91.6	88.8	79.2	67.5	58.9	79.3
Hyderabad (Sind)	96	63.6	67.1	77.6	86.2	91.6	91.7	88.6	86.0	86.0	82.7	73.4	65.0	72.9
Bikaner	771	59.2	63.6	76.6	88.4	94.1	94.7	90.4	87.3	87.3	82.4	70.1	61.4	79.6
Rajkote	429	66.8	70.0	77.4	85.1	89.2	87.5	81.7	80.6	80.8	80.4	74.1	68.4	78.5
Ahmedabad	163	70.3	74.0	82.7	91.2	92.9	89.4	83.7	83.0	83.5	81.3	78.3	72.9	82.1
<b>PLATEAU STATIONS.</b>														
Akola	930	68.5	73.7	81.9	90.1	93.3	86.2	80.6	78.9	79.7	77.9	71.7	66.8	79.2
Jubbulpore	1,327	61.8	66.8	76.5	86.3	91.9	85.7	79.0	78.0	79.0	77.8	71.7	60.3	75.6
Nagpore	1,025	68.8	74.3	82.4	90.6	94.5	86.6	80.4	79.4	80.4	78.4	72.2	67.1	79.6
Raipur	970	67.7	73.6	81.9	90.3	93.6	86.0	79.6	79.0	80.3	78.1	71.5	66.0	79.0
Ahmednagar	2,162	67.1	71.3	77.5	82.5	83.8	79.2	76.2	74.9	74.5	75.1	70.5	67.1	75.0
Poona	1,840	69.8	73.9	80.1	83.9	83.8	78.7	74.9	73.7	74.4	76.2	72.5	68.9	75.9
Sholapur	1,590	72.7	77.7	84.2	88.4	88.9	81.8	78.9	77.7	77.3	77.7	74.6	71.3	79.3
Belgaum	2,539	69.8	73.0	77.5	79.2	78.0	72.8	70.1	69.7	70.4	72.9	70.9	69.3	72.8
Hyderabad (Deccan)	1,680	70.4	77.1	83.1	88.0	90.1	82.6	77.9	77.1	77.4	76.8	72.3	69.1	78.5
Bangalore	3,021	67.5	72.0	76.7	79.9	78.5	74.0	72.0	71.8	71.8	71.8	69.6	67.5	72.8
Bolary	1,475	73.2	79.6	85.6	89.2	89.0	83.4	80.9	80.6	80.2	79.1	75.3	72.5	80.8

Stations.	Eleva- tion in feet.	Jan.	Feb.	Mar.	Apr	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annua- l Total.
HILL STATIONS.														
Shillong	4,920	in.	in.	in.	in.	in.	in	in.	in.	in.	in.	in.	in.	in.
Darjeeling	7,576	0.49	0.81	1.85	4.29	10.06	16.46	13.48	12.79	14.75	6.23	0.98	0.25	32.44
Simla	7,224	3.21	2.07	2.48	2.32	3.71	7.84	18.42	17.87	6.17	1.19	0.41	1.28	67.97
Murree	6,333	3.73	4.14	3.96	3.62	2.99	3.41	12.51	13.40	5.64	1.86	1.27	1.37	57.90
Srinagar	5,204	3.36	4.24	3.10	3.30	2.72	1.77	2.78	1.95	1.18	1.14	0.41	1.08	27.03
Mount Abu	3,945	0.27	0.31	0.15	0.08	0.97	5.59	22.05	21.51	9.58	1.46	0.28	0.24	62.49
Ootacamund	7,327	0.35	0.38	1.00	3.46	5.93	6.18	5.04	4.70	4.44	8.57	4.00	1.65	46.60
Kodaikanal	7,688	1.17	1.48	3.39	5.29	6.47	4.01	3.89	5.99	6.70	12.49	8.17	5.57	64.82
COAST STATIONS.														
Karachi	49	0.64	0.30	0.15	0.13	0.03	0.43	3.16	1.77	0.66	0.04	0.16	0.19	7.66
Veraval	18	0.01	0.03	0.00	0.00	0.02	5.31	8.92	7.27	2.40	0.81	0.66	0.10	25.53
Bombay	37	0.12	0.02	0.01	0.05	0.55	20.56	24.56	14.91	10.93	1.76	0.47	0.05	73.99
Ratnagiri	110	0.60	0.02	0.05	0.15	1.27	31.32	34.25	20.19	12.53	3.62	0.65	0.06	104.71
Mangalore	65	0.13	0.07	0.11	2.06	7.26	38.47	37.39	22.88	11.09	7.90	1.97	0.50	129.83
Calcutta	27	0.17	0.16	0.79	3.70	9.04	30.46	29.36	14.89	7.39	9.12	3.80	1.32	116.20
Kanpuram...	31	1.15	0.72	0.32	1.02	1.81	1.30	1.74	3.29	3.55	10.08	15.02	11.23	51.23
Madras	22	0.83	0.28	0.37	0.65	1.96	2.06	3.80	4.66	4.84	10.93	13.30	5.25	48.93
Masulipatam	15	0.17	0.16	0.26	0.40	1.34	4.23	5.67	6.09	6.56	8.36	4.43	0.53	38.30
Gopalpur	21	0.23	0.43	0.56	0.73	2.01	5.76	6.11	7.20	6.86	9.84	3.50	0.72	43.95
Rangoon	57	0.11	0.23	0.16	1.74	11.73	18.30	21.37	19.65	15.89	7.12	2.52	0.07	98.89

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Eleva- tion in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annua- l Total.
STATIONS ON THE PLAINS.														
Tongoo	183	in	0.06	0.12	0.08	1.90	6.43	13.63	17.48	18.53	11.46	6.95	1.25	in. 78.05
Mandlay	250	0.06	0.08	0.21	1.19	5.26	5.71	3.26	4.16	6.21	6.34	4.54	1.67	0.28 32.63
Silchar	104	0.04	2.32	7.93	13.56	20.39	19.98	18.69	15.54	12.43	6.40	1.31	0.54	121.43
Calcutta	21	0.29	1.02	1.14	1.54	5.60	11.04	12.31	12.63	10.40	3.87	0.62	0.31	60.83
Burdwan	99	0.38	0.89	1.24	2.20	5.36	10.17	12.32	11.49	8.59	3.93	0.64	0.13	47.54
Patna	183	0.72	0.53	0.35	0.30	1.70	7.76	11.41	10.72	7.82	2.89	0.20	0.14	54.54
Benares	267	0.71	0.51	0.32	0.15	0.56	5.45	12.54	11.13	6.54	2.24	0.17	0.17	40.59
Allahabad	309	0.82	0.48	0.38	0.14	0.29	5.09	12.24	10.88	6.32	2.40	0.25	0.23	39.52
Lucknow	368	0.90	0.45	0.32	0.11	0.91	5.41	11.39	11.32	6.61	1.33	0.08	0.44	39.20
Agra	535	0.55	0.38	0.25	0.16	0.64	2.84	9.67	7.11	4.41	0.39	0.06	0.29	26.70
Meerut	758	1.05	0.85	0.63	0.34	0.70	3.60	9.37	7.64	4.55	0.43	0.08	0.40	29.82
Delhi	718	1.02	0.61	0.67	0.35	0.71	3.18	8.38	7.44	4.42	0.39	0.10	0.43	27.70
Lahore	702	0.87	1.12	0.89	0.51	0.80	1.86	6.65	4.88	2.10	0.43	0.11	0.47	20.70
Multan	420	0.39	0.36	0.42	0.27	0.39	0.43	2.19	1.66	0.60	0.07	0.06	0.27	7.11
Jacobabad	186	0.28	0.27	0.25	0.17	0.15	0.10	1.18	1.25	0.19	0.01	0.10	0.15	4.10
Hyderabad (Sindh)	96	0.24	0.22	0.10	0.07	0.11	0.41	2.61	2.77	0.51	0.00	0.10	0.05	7.22
Bikaner	771	0.38	0.24	0.18	0.14	0.84	1.65	3.29	3.14	1.08	0.09	0.06	0.18	11.27
Rajkote	429	0.05	0.10	0.01	0.01	0.31	3.21	10.89	6.41	3.75	0.67	0.33	0.06	27.80
Ahmedabad	163	0.02	0.10	0.01	0.03	0.46	3.94	11.49	8.26	4.42	0.35	0.19	0.05	29.82
PLATEAU STATIONS.														
Akola	930	0.45	0.18	0.03	0.13	1.45	5.35	6.90	4.03	4.43	3.63	0.87	0.30	28.74
Jubbulpore	1,327	0.72	0.52	0.48	0.22	0.47	8.53	18.82	15.13	8.38	2.14	0.44	0.58	31.27
Nagpur	1,025	0.58	0.42	0.57	0.46	0.68	8.44	13.49	9.79	8.11	1.55	0.37	0.26	35.43
Baipur	970	0.30	0.23	0.59	0.39	0.76	9.38	14.94	12.72	7.75	2.14	0.51	0.45	45.62
Ahmednagar	2,152	0.27	0.12	0.15	0.40	1.16	4.73	3.03	3.60	6.73	2.09	0.62	0.20	50.27
Poona	1,840	0.18	0.05	0.13	0.58	1.45	5.35	6.90	4.03	4.43	3.12	0.89	0.44	24.66
Sholapur	1,590	0.06	0.08	0.29	0.63	1.09	4.41	4.19	5.42	7.77	4.11	0.85	0.20	28.26
Belgaum	2,539	0.06	0.03	0.49	2.05	2.73	9.32	15.37	9.15	4.05	3.63	0.87	0.30	28.74
Hyderabad (Deccan)	1,680	0.05	0.12	0.67	0.73	0.78	4.44	6.22	6.76	7.10	5.09	1.38	0.24	49.91
Bangalore	3,021	0.06	0.22	0.72	1.19	4.59	3.18	4.13	6.00	7.11	2.98	1.53	0.17	31.55
Bellary	1,475	0.10	0.03	0.42	0.83	1.93	1.84	1.41	2.18	4.12	2.61	0.39	0.39	36.53
											4.04	1.20	0.20	18.30

## MONSOON OF 1916.

The monsoon rains were on the whole abnormally heavy, and in this respect contrast very favourably with those of 1915.

The Arabian Sea monsoon arrived on the west coast at about the average date, while the Bay current appeared in north-east India upwards of a week earlier than usual. The establishment of monsoon conditions in the interior occurred in the normal manner. Both currents were more active than usual until the 26th June when break set in over by far the greater part of the country; this lasted up to the 2nd of July in the peninsula and another five days in northern and central India. Strongly marked monsoon conditions prevailed generally from the 8th to the 15th but during the rest of July the monsoon was somewhat inactive outside the Peninsula.

During August and September the currents were remarkably vigorous and abundant rainfall occurred in almost all parts of the country, it particularly in the normally dry zone north-west India.

A conspicuous feature of the season was the small number of cyclonic storms.

The total rainfall of the season from June 1st to September 30th was either about normal or in excess in all parts of the country with the exception of Assam (—14 per cent.), Chota Nagpur (—21 per cent.) and Kashmir (—20 per cent.). The excess was large (*i.e.*, upwards of 50 per cent.) in the North-West Frontier Province, Baluchistan, Sind and Rajputana West, and considerable (between 25 and 50 per cent.) in Bihar, the United Provinces, the Punjab, East and North, Rajputana East, Central India West, Berar, the Konkan, Hyderabad South, Mysore and the Madras Deccan.

On the general average of all the meteorological observatories in the plains of India there was an excess of 4.9" or 13 per cent. which is as large as that recorded in 1892, the wettest monsoon hitherto on record.

Rainfall, June to September 1916.

Division.	Rainfall, June to September 1916.			
	Actual.	Normal.	Departure from normal.	Percentage departure from normal
Arma .. .. .	81.2	7.7	+ 4.2	+ 5
am .. .. .	51.6	60.3	— 8.7	— 14
ngal .. .. .	65.1	56.0	+ 9.1	+ 16
har and Orissa .. .. .	47.7	45.3	+ 2.4	+ 5
ited Provinces .. .. .	47.1	36.6	+10.5	+ 29
njab .. .. .	20.0	15.7	+ 4.3	+ 27
nth-West Frontier Province .. .	10.1	5.1	+ 5.0	+ 98
id .. .. .	12.7	4.8	+ 7.9	+ 165
putana .. .. .	26.6	18.4	+ 8.2	+ 45
mbay .. .. .	45.5	38.6	+ 6.9	+ 18
tral India .. .. .	41.7	34.0	+ 7.7	+ 23
tral Provinces .. .. .	42.5	40.6	+ 1.9	+ 5
derabad .. .. .	34.2	27.2	+ 7.0	+ 26
sore .. .. .	19.4	15.5	+ 3.9	+ 25
iras .. .. .	28.3	26.3	+ 2.0	+ 8
Mean of India .. .. .	42.0	37.1	+ 4.9	+ 13

## The Textile Industry.

India has been the home of the cotton trade from the earliest times. Its cotton, known as white wool, was well known to the ancients, and its cloth was familiar to the West in the days of the overland route. The name Calico comes from the fine woven goods of Calicut, and the products of the Dacca handlooms are still remarkable as the finest muslins human skill can produce.

### Indian Cotton.

The exports of Indian cotton began to assume importance with the opening of the sea route. They received an immense stimulus during the American Civil War, when the close blockade of the Confederate ports produced a cotton famine in Lancashire, and threw the English spinners back on India for their supply of raw material. When the war broke out the shipments of Indian cotton were 528,000 bales, but during the last years of the war they averaged 973,000 bales. Most of this cotton was sold at an enormously inflated price, and induced a flow of wealth into Bombay, the great centre of the trade, for which there was no outlet. The consequence was an unprecedented outburst of speculation known as the "Share Mania," and when the surrender of Lee re-opened the Southern Ports widespread ruin followed. It is estimated that the surplus wealth brought into the country by the American Civil War aggregated £92 millions. Since then the cultivation of Indian cotton, although interrupted by famine, has steadily increased. For the last season for which returns are available, 1915-16, the total area in all the territories reported on was computed at 17,987,000 acres which marked a net decrease of 6,328,000 acres or 27 per cent. on the 24,593,000 acres (revised figure) of the previous year. The total estimated outturn was 3,189,000 bales of 400 lbs. as against 5,209,000 bales for previous year, representing a decrease of nearly 27 per cent. To this figure may be added some 1,000 bales estimated as the production in Native States in Berar and Orissa which make no return.

Bombay, the Central Provinces and Hyderabad are the chief producing centres. The following table gives the rough distribution of the outturn. The figures are the estimated figures for the past season, and are not exact, but they indicate the distribution of the crop:—

	Area (acres)	Yield (bales)
Burma .. ..	190,000	27,000
Behar and Orissa ..	68,000	16,000
Assam .. ..	32,000	10,000
Hyderabad .. ..	3,220,000	450,000
Bengal .. ..	68,000	30,000
United Provinces ..	834,000	202,000
Ajmer-Merwara ..	23,000	2,000
Punjab .. ..	819,000	196,000
North-West Frontier ..	26,000	6,000
Sind .. ..	109,000	351,000
Bombay and Baroda ..	4,815,000	1,010,000
Central Provinces & Berar	4,061,000	1,106,000
Central India .. ..	999,000	216,000

Madras .. ..	2,188,000	357,000
Rajputana .. ..	244,000	66,000
Mysore .. ..	92,000	14,000

The distribution of the export trade is indicated in the appended table.

**Exports of cotton.**—A portion of the Indian crop of the season 1914-15 and a portion of the crop of the season 1915-16 came into statistical consideration in the exports during the year 1915-16. The exports amounted to 9 million cwts. valued at Rs. 25 crores, against 10½ million cwts., valued at Rs. 33½ crores in 1914-15. This represents 42 per cent. of the total value of raw materials exported from India and 19 per cent. of the total exports. The exports showed a decrease of nearly 14 per cent. in quantity and 25 per cent. in value. The average declared value per unit fell from Rs. 38-10-1 to Rs. 32-5-0 per cwt. or by 16 per cent. and the total loss due to reduced prices amounted to Rs. 6½ crores. The distribution of the trade is shown below. The United Kingdom and Japan had larger receipts during the war period as compared with those in the earlier period. The principal purchasers of cotton other than Japan are in normal years Germany, Belgium, Italy, Austria-Hungary and France.

	Exports of Raw Cotton.	
	1914-15. Cwts.	1915-16. Cwts.
United Kingdom ..	707,779	823,502
Germany .. ..	1,239,42	....
Belgium .. ..	794,367	....
France .. ..	552,273	203,707
Spain .. ..	224,904	227,061
Italy .. ..	1,351,002	1,097,138
Austria-Hungary ..	585,735	....
China .. ..	248,190	381,074
Japan .. ..	4,454,931	5,913,981
Other Countries ..	186,430	140,852
Total .. ..	10,349,045	8,806,316

Bombay is the great centre of the cotton trade. The principal varieties are Dholleras, Broach, Oomras (from the Berars), Dharwar and Coomptas. Broach is the best cotton grown in Western India. Hinganghat cotton, from the central Provinces, has a good reputation. Bengals is the name given to the cotton of the Gangetic valley, and generally to the cottons of Northern India. The Madras cottons are known as Westerns, Coconadas, Coimbatores and Tinnevellys. The best of these is Tinnevely. Cambodia cotton has been grown with success in Southern India, but it shows a tendency to revert. The high prices of cotton realised of recent years have given a great impetus to cultivation. Government have also been active in improving the class of cotton produced, by seed selection, hybridization and the importation of exotic cottons. Although these measures have met with a considerable measure of success, they have not proceeded far enough to lighten the whole outturn, which still consists for the most

art of a short-staple early maturing variety, suitable to soils where the rainy season is brief.

Reference has been made to the popularity of the Indian handloom cloths in the earliest days of which we have record. This trade grew so large that it excited alarm in England, and it was killed by a series of enactments, commencing in 1701, prohibiting the use or sale of Indian calicoes in England. The invention of the spinning jenny and the power

loom and their development in England converted India from an exporting into an importing country, and made her dependent on the United Kingdom for the bulk of her piece-goods. The first attempt to establish a cotton mill in India was in 1838, but the foundations of the industry were really laid by the opening of the first mill in Bombay in 1856. Thereafter, with occasional set backs from famine, plague and other causes, its progress was rapid.

The following statement shows the quantity (in pounds) of yarn of all counts spun in all India for the twelve months, April to March, in each of the past three years:—

	1913-14.	1914-15.	1915-16.
Bombay .. .. .	479,682,975	448,556,493	509,770,810
Madras .. .. .	44,673,626	43,031,691	44,303,310
Bengal .. .. .	33,219,947	31,708,798	32,096,459
U. P. .. .. .	44,468,505	50,281,135	48,444,669
Punjab and Delhi .. .. .	6,274,754	6,813,549	7,541,325
C. P. and Berar .. .. .	36,532,870	34,565,150	37,443,174
Native States .. .. .	37,924,174	37,027,841	39,269,880
GRAND TOTAL ..	682,776,851	651,984,657	722,424,579

The spinning of yarn is in a large degree centred in Bombay, the mills of that province producing nearly 75 per cent. of the quantity produced in British India. The United Provinces of Agra and Oudh and Madras produced about 7 per cent. each, while Bengal and the Central Provinces produced 5.5 and 4.7 per cent. respectively. Elsewhere the production is as yet very limited.

#### BOMBAY SPINNERS.

Here is a detailed statement of the quantity (in pounds) and the counts, or numbers, of yarn spun in Bombay Island:—

	1913-14.	1914-15.	1915-16.
Nos. 1 to 10 .. .. .	89,351,981	88,219,669	97,875,248
" 11-20 .. .. .	186,216,653	162,657,972	197,320,321
" 21-30 .. .. .	74,751,191	66,552,972	77,107,994
" 31-40 .. .. .	3,830,673	4,016,805	3,831,691
Above 40 .. .. .	822,287	599,962	557,233
Wastes, &c. .. .. .	51,911	105,902	50,314
TOTAL ..	355,024,690	322,153,282	376,742,801

#### YARN AT AHMEDABAD.

The corresponding figures for Ahmedabad are as follows:—

	1913-14.	1914-15.	1915-16.
Nos. 1-10 .. .. .	1,503,504	2,239,295	3,146,878
" 11-20 .. .. .	14,912,547	21,010,020	24,438,529
" 21-30 .. .. .	39,543,101	39,011,371	44,701,403
" 31-40 .. .. .	11,890,408	8,970,048	10,546,467
Above 40 .. .. .	958,218	252,205	83,339
Wastes, &c. .. .. .	144,959	4,713	4,052
TOTAL ..	68,952,737	72,487,652	82,920,668

## YARN SPUN THROUGHOUT INDIA.

The grand totals of the quantities in various counts of yarn spun in the whole of India, including Native States, are given in the following table:—

	1013-14.	1914-15.	1915-16.
Nos. 1-10 .. .. .	130,783,748	131,009,572	145,306,797
" 11-20 .. .. .	361,908,914	343,326,016	386,187,603
" 21-30 .. .. .	166,994,607	156,240,084	169,743,636
" 31-40 .. .. .	19,712,298	18,701,101	18,572,994
Above 40 .. .. .	2,698,686	2,232,668	1,962,987
Wastes, &c. .. .. .	678,598	475,210	650,592
<b>TOTAL ..</b>	<b>682,776,851</b>	<b>651,984,657</b>	<b>722,424,570</b>

In the early days of the textile industry the energies of the millowners were largely concentrated on the production of yarn, both for the China market, and for the handlooms of India. The increasing competition of Japan in the China market, the growth of an indigenous industry in China and the uncertainties introduced by the fluctuations in the China exchanges consequent on variations in the price of silver compelled the millowners to cultivate the Home market. The general tendency of recent years has been to spin higher counts of yarn, importing American cotton for this purpose to supplement the Indian supply, to erect more looms, and to produce more dyed and bleached goods. This practice has reached a higher development in Bombay than in other parts of India, and the Bombay Presidency produces nearly 87 per cent. of the cloth woven in India. The United Provinces produces 3.8 per cent., the Central Provinces 5 per cent. and Madras about 3 per cent. Grey (unbleached) goods still represent nearly 77 per cent. of the whole production, but dyeing and bleaching are making rapid progress.

### ANALYSIS OF WOVEN GOODS.

The following brief extract is taken from the statement of the quantity (in pounds and their equivalent in yards) and description of woven goods produced in all India, including Native States:—

	1913-14.	1914-15	1915-16.
<b>Grey and Bleached piece-goods—</b>			
Pounds .. .. .	202,763,449	213,576,441	276,165,288
Yards .. .. .	872,445,720	880,501,618	1,094,867,131
<b>Coloured piece-goods—</b>			
Pounds .. .. .	68,820,264	61,067,187	81,603,755
Yards .. .. .	291,845,868	255,206,334	346,647,419
<b>Grey and coloured goods other than piece-goods—</b>			
Pounds .. .. .	2,166,496	1,735,087	2,540,553
Dozens .. .. .	637,640	512,485	653,344
<b>Hosiery—</b>			
Pounds .. .. .	471,349	285,918	356,077
Dozens .. .. .	267,411	179,373	220,754
<b>Miscellaneous—</b>			
Pounds .. .. .	157,902	341,267	588,883
<b>Total—</b>			
Pounds .. .. .	274,388,550	277,005,000	352,254,556
Yards .. .. .	1,164,291,588	1,135,707,952	1,441,415,550
Dozens .. .. .	905,051	691,858	874,098

### BOMBAY WOVEN GOODS.

The output of woven goods during the three years in the Bombay Presidency was as follows. (The weight in pounds represents the weight of all woven goods; the measure in yards represents the equivalent of the weight of the grey and coloured piece-goods.)

	1913-14.	1914-15.	1915-16.
<b>Pounds .. .. .</b>	<b>218,042,731</b>	<b>222,159,912</b>	<b>287,487,309</b>
<b>Yards .. .. .</b>	<b>941,672,596</b>	<b>926,589,396</b>	<b>1,102,489,745</b>
<b>Dozens .. .. .</b>	<b>701,305</b>	<b>500,180</b>	<b>675,189</b>



The grand totals for all India are as follows :—

		1913-14.	1914-15.	1915-16.
Pounds	.. .. .	274,288,550	277,005,900	352,254,556
Yards	.. .. .	1,164,291,588	1,135,707,952	1,441,514,550
Dozens	.. .. .	905,051	691,858	874,098

## THE TRADE OF THE YEAR.

In 1915-16 there was a satisfactory off-take of stocks, due to the demand for more costly goods of the coloured and bleached varieties. This did much to resuscitate a depressed market. For the most important class of piece-goods manufactured in India or imported, grey piece-goods, there was during the last two years only a small demand. Since then, there have been inquiries for these goods from new as well as from old markets, for example, the African and Persian ports, which were formerly supplied from Continental countries. This opportune demand has employed the plain looms which do little or no other work except that of the standard qualities of certain well known mills.

**Outturn.**—The outturn of the mills in India during the last five years is shown in the following table, from which it will be seen that the production of both yarn and woven goods during 1915-16 increased to the highest quantity ever recorded :—

	Yarn	Woven goods
	Million lbs.	Million lbs.
1911-12 .. ..	625	207
1912-13 .. ..	688	285
1913-14 .. ..	683	274
1914-15 .. ..	652	277
1915-16 .. ..	722	352

Yarn was spun to the extent of 722 million lbs., an increase of 70½ million lbs. or 11 per cent., and woven goods amounted to 352 million lbs., an increase of 75½ million lbs. or 27 per cent., as compared with 1914-15. The value of the mill production in 1915-16 is roughly estimated at Rs. 31.23 lakhs for yarn and Rs. 14.61 lakhs for woven goods, as against Rs. 30.57 lakhs and Rs. 14.78 lakhs, respectively, in 1914-15. The value of the total imports of yarn and woven goods in 1915-16 was Rs. 43.28 lakhs, i.e., Rs. 2.56 lakhs less than the estimated value of Indian production. In 1914-15 the total imports were greater than the total production by Rs. 3.05 lakhs.

**Export.**—The total export trade in cotton twist and yarn and piece-goods, as will be seen from the following table, considerably improve last year :—

	Twist and Yarn			Piece-goods.		
	Million lbs.	Rs. (lakhs.)		Million yards	Rs. (lakhs.)	
1918-14 .. ..	198	9.83		80	2.14	
1914-15 .. ..	134	6.29		67	1.59	
1915-16 .. ..	160	6.92		113	2.47	

Although the trade in twist and yarn increased by 20 per cent. in quantity and 10 per cent. in value to 160 million lbs. valued at Rs. 6.92 lakhs, it was still much below the level of 1913-14. The average declared value per lb. was 6 annas 11 pies against 7 annas 6 pies in 1914-15. China is the principal consumer, taking 140 million lbs. valued at Rs. 5.95 lakhs, as against 117 million lbs. valued at Rs. 5.42 lakhs, in 1914-15. Owing to the war, the trade with Asiatic Turkey has considerably suffered. This loss was, however, made good by larger exports to Egypt, to Aden, and to Persia. There was no appreciable change in the exports to the Straits. The United Kingdom received consignments of about 2½ million lbs. of yarn and Siam and Java together 1½ million lbs. Bombay accounted for nearly 95 per cent. of the total exports abroad, Madras 3½ per cent., and Bengal 1½ per cent.

The production of grey and bleached piece-goods at the Indian weaving mills showed an increase of 54 million lbs. or 214 million yards and that of coloured piece-goods an increase of 20½ million lbs. or 91 million yards. Grey and coloured goods other than piece-goods increased by 800,000 lbs. to 2½ million lbs. Hosiery also improved by 70,000 lbs. to 356,000 lbs.

Cheap cotton blankets, etc., were manufactured during the year by Indian mills to replace those which had formerly been imported from Germany.

**The Industry.**—At the end of 1915-16 there were in India 261 cotton mills, 6,646,784 spindles and 108,083 looms at work, employing on an average 275,019 persons. The Bombay Presidency possesses 70.1 per cent. of the mills, 70.6 per cent. of the spindles, and 78.6 per cent. of the looms. The highest capacity per loom reached in the year 1912-13 was outstripped in the year

**Exports of Piece-goods.**—The exports of cotton piece-goods showed a large increase of 69 per cent. in quantity and 55 per cent. in value. There was, however, a decrease in the declared value per yard from 3 annas 9 pies to 3 annas 6 pies. The exports consisted almost entirely of coloured, printed or dyed goods (52 per cent.) and grey unbleached goods (48 per cent.). The former increased by 25 million yards or 74 per cent. to 59 million yards, and the latter by 21 millions or 64 per cent. to 54 million yards. Very large consignments were sent to Asiatic Turkey (13½ million yards against 4½ millions in 1914-15), Aden (19½ millions against 10½ millions), Persia (13½ millions against 5½ millions) and Egypt (nearly 5 millions against 1½ millions). Ceylon, the Straits, East African Ports, and Siam also increased their imports from India during 1915-16.

**Progress of the Mill Industry.**

The following statement shows the progress of the Mill Industry in the whole of India.

Year ending 30th June.	Number of Mills.	Number of Spindles.	Number of Looms.	Average No. of Hands Employed Daily.	Approximate Quantity of Cotton Consumed.	
					Cwts.	Bales of 392 lbs.
1897 .. .. .	173	4,065,618	37,681	144,335	4,553,276	1,300,936
1898 .. .. .	185	4,259,720	38,013	148,964	5,184,648	1,481,328
1899 .. .. .	188	4,728,333	39,069	162,108	5,863,165	1,675,190
1900 .. .. .	193	4,945,783	40,124	161,189	5,086,732	1,453,852
1901 .. .. .	193	5,006,936	41,180	172,883	4,731,090	1,351,740
1902 .. .. .	192	5,006,965	42,584	181,031	6,177,633	1,765,038
1903 .. .. .	192	5,043,297	44,092	181,399	6,087,690	1,739,340
1904 .. .. .	191	5,118,121	45,337	184,779	6,106,681	1,744,766
1905 .. .. .	197	5,163,486	50,139	195,277	6,577,354	1,879,244
1906 .. .. .	217	5,279,595	52,668	208,616	7,082,306	2,022,516
1907 .. .. .	224	5,333,275	58,436	205,696	6,930,595	1,980,170
1908 .. .. .	241	5,756,020	67,920	221,195	6,970,250	1,991,500
1909 .. .. .	259	6,053,231	76,898	236,024	7,381,500	2,109,000
1910 .. .. .	263	6,195,671	82,725	233,624	6,772,535	1,935,010
1911 .. .. .	263	6,357,460	85,352	230,649	6,070,531	1,905,866
1912 .. .. .	268	6,463,929	88,951	243,637	7,175,357	2,050,102
1913 .. .. .	272	6,596,862	94,136	253,786	7,336,056	2,096,016
1914* .. .. .	271	6,778,895	104,179	260,276	7,500,961	2,143,126
1915* .. .. .	272	6,848,744	108,009	265,346	7,359,212	2,102,632

\* Year ending 31st August.

**Earnings of Labour.**

In 1915-16, as compared with the previous year, there were no fluctuations of importance in the earnings of labour. In cotton industry in January 1916, as compared with the corresponding period of last year, there was also no marked change in the wages, but compared with the pre-war period the rates showed an increase of 3 per cent., the rise being chiefly in the sizing and weaving departments.

**AVERAGE WAGES.**

Cotton.	Rate per	1914.	1915.	1916.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Card Room .. .. .	Month	12 11 5	12 13 0	12 13 7
Ring-throstle Room .. .. .	"	12 0 0	12 0 8	12 0 8
Reeling Room .. .. .	"	9 8 0	9 8 0	9 8 0
Bundling Room .. .. .	"	16 0 0	16 0 0	16 0 0
Sizing Department .. .. .	"	22 12 8	23 6 10	23 6 10
Weaving Department .. .. .	"	31 0 0	33 8 0	36 0 0

Statement of the amount in rupees of Excise duty realised from goods woven in the Cotton Mills in British India; under the Cotton Duties Act, II of 1896; also the amount of equivalent duty levied in the Native States; in each year from 1895-96 to 1912-13,

		Bombay.	Madras	Bengal	United Provinces of Agra and Oudh (also Ajmer- Merwara).	Punjab and D. Liu.	Central Provinces and Berar (a)
1896-97	.. .. .	9,14,480	56,300	4,480	45,870	13,270	89,040
1897-98	.. .. .	9,66,600	66,470	1,180	44,350	14,460	79,269
1898-99	.. .. .	11,26,300	89,130	900	61,000	12,730	84,969
1899-1900	.. .. .	10,95,230	88,078	2,523	54,818	10,448	88,109
1900-01	.. .. .	10,28,542	41,827	5,038	50,116	5,806	84,978
1901-02	.. .. .	15,26,103	54,139	5,863	69,284	4,379	1,10,140
1902-03	.. .. .	15,84,121	67,813	6,005	74,023	3,031	1,30,620
1903-04	.. .. .	17,64,527	62,350	10,908	80,189	1,104	1,56,371
1904-05	.. .. .	20,43,832	85,379	11,929	96,710	2,607	1,61,368
1905-06	.. .. .	22,78,425	1,10,943	11,165	1,32,364	6,144	1,68,743
1906-07	.. .. .	24,36,265	1,32,693	23,709	1,35,884	7,464	1,64,680
1907-08	.. .. .	24,82,296	1,35,131	31,556	1,66,044	8,746	1,75,944
1908-09	.. .. .	29,51,850	1,42,295	53,351	1,88,345	9,509	1,98,419
1909-10	.. .. .	33,88,658	1,45,333	55,822	1,92,552	6,611	2,17,217
1910-11	.. .. .	36,78,555	1,48,136	56,359	1,82,083	7,300	2,07,818
1911-12	.. .. .	42,17,878	1,65,048	48,631	1,84,653	10,862	2,52,415
1912-13	.. .. .	48,27,698	2,06,862	81,709	2,11,847	17,971	2,71,882
1913-14	.. .. .	45,68,188	2,13,166	78,951	2,55,467	22,353	3,00,919
1914-15	.. .. .	42,31,540	1,83,880	53,046	2,07,454	10,068	2,54,837
1915-16	.. .. .	42,25,608	2,11,456	41,704	2,01,012	9,291	2,36,407

Total British India.				Native States.	Grand Total.	
Gross duty.		Net duty.	Gross duty.	Gross duty	Net duty.	
1896-97	.. .. .	11,23,440	10,91,590	18,459	11,41,899	11,10,049
1897-98	.. .. .	11,06,329	11,38,950	47,835	12,14,164	11,86,785
1898-99	.. .. .	13,75,112	13,53,120	52,186	14,27,305	14,05,306
1899-1900	.. .. .	13,30,812	13,00,514	40,937	13,80,749	13,50,451
1900-01	.. .. .	12,16,367	11,62,947	48,449	12,64,756	12,11,396
1901-02	.. .. .	17,69,908	17,16,836	61,171	18,31,079	17,77,965
1902-03	.. .. .	18,60,213	18,25,469	63,541	19,31,754	18,91,010
1903-04	.. .. .	20,77,449	20,36,104	59,061	21,36,510	20,95,149
1904-05	.. .. .	23,81,825	23,33,636	67,320	24,49,145	24,06,976
1905-06	.. .. .	27,06,784	26,71,061	83,455	27,90,239	27,54,516
1906-07	.. .. .	29,00,957	28,64,202	81,976	29,82,671	29,46,152
1907-08	.. .. .	33,99,717	33,55,946	97,499	34,97,216	34,53,443
1908-09	.. .. .	35,43,778	34,98,480	1,11,498	36,58,276	36,12,977
1909-10	.. .. .	40,06,193	39,61,020	1,37,999	41,43,892	40,98,719
1910-11	.. .. .	42,26,575	1,75,878	1,75,878	44,56,129	44,01,707
1911-12	.. .. .	48,70,478	48,04,492	1,82,479	50,61,957	49,86,071
1912-13	.. .. .	56,17,969	55,76,567	2,21,178	58,39,147	57,97,745
1913-14	.. .. .	54,39,043	53,95,014	2,38,393	56,77,436	56,33,407
1914-15	.. .. .	49,40,931	49,32,185	2,38,160	51,74,091	51,65,345
1915-16	.. .. .	49,25,568	48,65,181	1,86,074	51,12,242	50,51,855

## The Jute Industry.

Considering its present dimensions, the jute industry of Bengal is of very recent origin. The first jute mill in Bengal was started at Rishra in 1855, and the first power-loom was introduced in 1859. The original outturn was 8 tons per day. In 1909 it had grown to 2,600 tons per day, it is now 3,000 tons per day, and it shows every indication of growing and expanding year by year. Another interesting thing about the jute industry of Bengal is that, although it is practically a monopoly of Scotsmen from Dundee, the industry itself owes its inception to an Englishman. The founder of the industry was George Acland, an Englishman, who began life as a midshipman in the navy, and was for some years in the East India Marine Service. He quitted this service while still a young man, and engaged in commercial pursuits in Ceylon, where he was successful. Later on he turned his attention to Bengal, and arriving in Calcutta about 1853 he got into touch with the management of the paper works, then at Serampore, where experiments were being tried with country grasses and fibre plants to improve the quality or cheapen the manufacture of paper. This seems to have suggested to Acland the manufacture of ree, and in 1854 he proceeded to England, with a view to obtaining machinery and capital in order to manufacture goods from that material. During this trip he visited Dundee, and while there Mr. John Kerr, of Douglas Foundry, suggested to him the importing of machinery into Bengal "where the jute comes from and spin it there." This suggestion bore fruit, for shortly afterwards Acland placed orders with Kerr for a few systems of preparing and spinning machinery, and returned to India the same year accompanied by his two sons and a few Dundee mechanics who were to assist him in erecting and operating the first jute mill in Bengal. This, as has been stated, was at Rishra, the site of the present Wellington mills, near Serampore, and here, in 1855, the first machine spun jute yarns were made. As not infrequently happens the pioneer got very little out of his venture. After several ups and downs the Acland interest in the Rishra mill ceased in 1867, and the company which Acland had formed in 1854 was wound up in 1868.

**Power-loom.**—The pioneer's example was followed by Mr. George Henderson of that ilk and firm, and in 1859 the Borneo Jute Co. was launched under his auspices. To this company is due the credit of introducing the power-loom for jute cloth. Unhindered by the financial difficulties which had burdened the Aclands, the Borneo Jute Co. made rapid progress, doubling their works in 1864, and clearing their capital twice over. In 1872 the mills were turned into a limited liability company, the present "Barnagore Jute Manufacturing Co., Ltd." Four other mills followed in succession—Gouripore, Serajunge, and India Jute Mills.

"From 1868 to 1873," writes Mr. David Wallace in "The Romance of Jute," "the five mills excepting the Rishra mill simply

coined money and brought the total of their looms up to 1,250." To illustrate the prosperity of the industry at this period we may take the dividends paid by the Barnagore Company. On the working of their first half year, a 15 per cent. interim dividend was declared, which seemed to justify the enormous capital at which the company was taken over from the Borneo Company, and shares touched 68 per cent. premium. The dividend for the first year, ending August 1873, was 25 per cent., for 1874, 20 per cent., and for 1875 10 per cent. Then came a change. The investing public had forgotten the effect of the Port Canning bubble, and the condition of the jute industry in 1872-73 seeming to offer a better return than coal or tea, both of which had just enjoyed a boom, it was only necessary to issue a prospectus of a jute mill to have all the shares snapped up in the course of an afternoon.

In 1872-73 three new companies were floated locally—the Fort Gloster, Budge Budge and Sibpore, and two Home companies, the Champdany and Samnugger, all of which commenced operations in 1874. In 1874-5 eight other mills were launched—the Howrah, Oriental (now Union), Asiatic (now Soorah), Clive, Bengal Pressing and Manufacturing Co. (now the Bellaghatia-Barnagore branch mill), Rustonjee (now the Central), Ganges (registered in England), and Hastings, owned by Messrs. Birkmyre Bros., of Greenock fame—in all thirteen new companies, coming on all of a heap and swelling the total looms from 1,250 up to 3,500. This was too much of a strain for the new industry, and for the next ten years all the mills had a severe struggle. The older ones all survived the ordeal, but four of the new concerns—the Oriental, the Asiatic, the Bengal Pressing and Manufacturing Co. and the Rustonjee—became moribund, to appear again later on under new names and management. Fort Gloster also suffered badly.

Between 1875 and 1882 only one new mill was put up. This was Kamarhatti, promoted by Messrs. Jardine, Skinner & Co., which came into being in 1877, as the result of Dr. Barry's visit to Calcutta in 1876, when he transferred the agency of the Gouripore Co. from Messrs. Jardine, Skinner & Co. to his own firm. This mill, together with additions made by some of the other mills, brought the total looms up to 5,150 in 1882. By the end of 1885 the total was further augmented by the Hooghly, Titaghur, Victoria and Kankarnah mills, bringing the number of looms at work up to 6,700. From this period on to 1894 no new mills came into existence except the Calcutta Twist Mill, with 2,460 spindles, since merged into the Wellington branch of the Champdany Co. Between 1896 and 1900 the following new mills were started:—the Gordon Twist Mill with 1,800 spindles (now acquired by Anglo-India), Khardah, Gondolpara (French owned), Alliance, Arathoon, Anglo-India, Standard, National, Delta (which absorbed the Serajunge), and the Kinnison. A lull of four years witnessed large extensions to the existing mills, after which came the following series of new

mills, besides further heavy extensions—Dalhousie, Alexandra, Nalhati, Lawrence, Reliance, Belvedere, Auckland, Kelvin and Northbrook.

### Progress of the Industry.

THE record of the jute industry may well be said to be one of uninterrupted progress. The following statement shows **quinquennial aver-**

**ages** from the earliest year for which complete information is available with actuals for the last five years; and the figures in brackets represent the variations for each period, taking the average of the quinquennium from 1879-80 to 1883-84 as 100. It will be seen that the number of looms and spindles in operation has increased to a very much larger extent than either the number of mills at work or the amount of nominal capital employed:

		Number of mills at work.	Nominal Capital (in lakhs of Rs.)	Number (in thousands) of		
				Persons employed.	Looms.	Spindles.
1879-80 to 1883-84	..	21 (100)	270.7 (100)	38.8 (100)	5.5 (100)	88 (100)
1884-85 to 1888-89	..	24 (114)	341.6 (126)	52.7 (136)	7 (127)	138.4 (157)
1889-90 to 1893-94	..	26 (124)	402.6 (149)	64.3 (166)	8.3 (151)	172.6 (196)
1894-95 to 1898-99	..	31 (148)	522.1 (193)	86.7 (223)	11.7 (213)	244.8 (278)
1899-1900 to 1903-04	..	36 (171)	680 (251)	114.2 (294)	16.2 (295)	334.6 (380)
1904-05 to 1908-09	..	46 (219)	960 (355)	105 (425)	24.8 (451)	510.5 (580)
1909-10	..	60 (286)	1,151 (425)	204.1 (526)	31.4 (571)	645.9 (734)
1910-11	..	68 (270)	1,150 (425)	216.4 (558)	33.1 (602)	682.5 (770)
1911-12	..	59 (281)	1,193 (441)	201.3 (519)	32.9 (598)	677.5 (770)
1912-13	..	61 (290)	1,196.5 (442)	204 (525)	34 (618)	708.7 (805)
1913-14	..	64 (305)	1,309.21 (480)	216.3 (557)	36 (654)	744.3 (846)
1914-15	..	70 (333)	1,394.3 (515)	238.3 (614)	38.4 (698)	795.5 (904)

The production of the mills has increased to a still greater extent. The following figures show the export of jute manufactures and the declared values for the quinquennial periods. The combined value of gunny bags and gunny-cloth exported by sea in 1913-14 is over twenty-two times as great as the average value of the exports in the period 1879-80 to 1883-84.

			Jute manufactures.		Value in lakhs of Rs.
			Gunny bags in millions of number.	Gunny cloths in millions of yards.	
1879-80 to 1883-84	..	..	54.9 (100)	4.4 (100)	124.9 (100)
1884-85 to 1888-89	..	..	77 (140)	15.4 (350)	162.9 (130)
1889-90 to 1893-94	..	..	111.5 (203)	41 (902)	299.3 (232)
1894-95 to 1898-99	..	..	171.2 (312)	182 (4,136)	518 (415)
1899-1900 to 1903-04	..	..	206.5 (376)	427.2 (9,709)	826.5 (662)
1904-05 to 1908-09	..	..	257.8 (469)	698 (15,864)	1,142.7 (1,154)
1909-10	..	..	364.4 (664)	940.1 (21,366)	1,709.6 (1,369)
1910-11	..	..	360.9 (657)	955.3 (21,711)	1,699.4 (1,361)
1911-12	..	..	289.9 (528)	871.5 (10,807)	1,600.8 (1,282)
1912-13	..	..	311.7 (568)	1,021.8 (23,223)	2,287.1 (1,831)
1913-14	..	..	368.8 (672)	1,061.2 (24,118)	2,827.3 (2,264)
1914-15	..	..	397.6 (724)	1,037.3 (24,030)	2,582 (2,067)

Up to the last quinquennium the exports of raw jute were marked by increases from year to year though the improvement was not so marked as in the case of manufactures. A slight increase in the exports occurred in 1909-10 compared with the figures for the preceding quinquennial period and a further decline in 1910-11, but a marked recovery was made in 1911-12 which was accentuated in 1912-13:—

		Jute, raw, in millions of cwt.	
1879-80 to 1883-84	.. ..	7.5	(100)
1884-85 to 1888-89	.. ..	8.0	(119)
1890-90 to 1893-94	.. ..	10	(133)
1894-95 to 1898-99	.. ..	12.3	(164)
1900-1900 to 1903-04	.. ..	12.7	(169)
1904-05 to 1908-09	.. ..	15.09	(201)
1909-10..	.. ..	14.6	(195)
1910-11..	.. ..	12.7	(169)
1911-12..	.. ..	16.2	(216)
1912-13..	.. ..	17.5	(233)
1913-14..	.. ..	15.4	(205)
1914-15..	.. ..	10.1	(134)

The price of raw jute reached a very high point in 1906-07, the rate being Rs. 65 per bale; in 1907-08 it dropped to Rs. 42 per bale, and the fall was accentuated in 1908-09 and 1909-10, the price having declined to 36.4 and Rs. 31 per bale respectively. In 1910-11 the price rose again to Rs. 41-8-0, to Rs. 51-4-0 in 1911-12 and further to Rs. 76-12-0 in 1913-14. The following are the quinquennial average prices per bale (400 pounds) of ordinary jute calculated from the prices current published by the Bengal Chamber of Commerce:—

		Price of jute, ordinary, per bale of 400 lbs. Rs. a. p.	
1879-80 to 1883-84	.. ..	23 8 0	(100)
1884-85 to 1888-89	.. ..	23 3 2	(99)
1889-90 to 1893-94	.. ..	32 6 5	(138)
1894-95 to 1898-99	.. ..	30 12 0	(131)
1899-1900 to 1903-04	.. ..	32 1 7	(137)
1904-05 to 1908-09	.. ..	44 13 6	(191)
1909-10..	.. ..	31 0 0	(132)
1910-11..	.. ..	41 8 0	(177)
1911-12..	.. ..	51 4 0	(218)
1912-13..	.. ..	54 12 0	(233)
1913-14..	.. ..	76 12 0	(327)
1914-15..	.. ..	54 8 0	(232)

The average prices of gunny cloth have been as follows:—

		Price of Hessian cloth 10½oz. 40" per 100 yds. Rs. a. p.	
1870-80 to 1883-84	.. ..	10 7 11	(100)
1884-85 to 1888-89	.. ..	8 0 7	(77)
1889-90 to 1893-94	.. ..	10 6 6	(90)
1894-95 to 1898-99	.. ..	9 11 8	(93)
1899-1900 to 1903-04	.. ..	10 2 10	(97)
1904-05 to 1908-09	.. ..	11 14 1	(112)
1909-10..	.. ..	9 3 6	(88)
1910-11..	.. ..	9 5 0	(89)
1911-12..	.. ..	11 14 0	(113)
1912-13..	.. ..	16 6 0	(156)
1913-14..	.. ..	17 0 0	(162)
1914-15..	.. ..	12 4 0	(117)

The 1916 crop.—The final figures of outturn for the three provinces work out as follows:—

PROVINCE	BALES.		Increase or Decrease.
	1915.	1916.	
Bengal—			
Western .. .. .	1,051,399	898,946	—152,453
Northern .. .. .	1,975,539	1,997,784	+22,245
Eastern .. .. .	3,479,128	4,533,145	+1,054,017
Cooch Behar .. .. .	72,335	68,000	—4,335
Bihar and Orissa (including Nepal) ..	692,873	626,238	—66,635
Assam .. .. .	152,869	216,153	+63,284
Total ..	7,424,143	8,340,266	+916,123

PROVINCE.	AREA IN ACRES.		Increase.
	1915.	1916.	
Bengal—			
Western . . . . .	325,858	333,784	7,926
Northern . . . . .	601,614	661,523	59,914
Eastern . . . . .	1,158,798	1,356,509	197,711
Cooch Behar . . . . .	27,556	31,741	4,185
Bihar and Orissa . . . . .	188,090	224,437	35,947
Assam . . . . .	74,000	78,700	4,700
Total . . . . .	2,375,916	2,686,99	310,383

The Jute Mills Association now one of the most important, if not the most important, of the bodies affiliated to the Bengal Chamber of Commerce, was started under the following circumstances:—In 1886 the existing mills, finding that, in spite of the constant opening up of new markets, working results were not favourable, came to an agreement, with the late S. E. J. Clarke, Secretary to the Chamber of Commerce, as trustee, to work short time. The only mills which stood out of this arrangement were the Hooghly and Sorajgunge. The first agreement, for six months dating from 15th February 1886, was subsequently renewed at intervals without a break for five years up to February 15, 1891. The state of the market at the time of the renewals dictated the extent of the short time, which varied throughout the five years between 4 days a week, 9 days a fortnight and 5 days a week. Besides short time, 10 per cent. of the sacking looms were shut down for a short period in 1890. An important feature of this agreement was a mutual undertaking by the parties not to increase their spinning power during the currency of the agreement, only a few exceptions being made in the case of a few incomplete new mills.

**Working days.**—With the introduction of the electric light into the mills in 1896, the working day was increased to 15 hours, Saturdays included, which involved an additional amount of cleaning and repairing work on Sundays. In order to minimise this Sunday work and give them a free Sunday, an agitation was got up in 1897 by the Mill European assistants to have the engines stopped at 2 or 3 p.m. on Saturdays. The local Government took the matter up, but their action went no further than applying moral suasion, backed by a somewhat half-hearted threat. The Mill Association held meetings to consider the question and the members were practically agreed as to the utility of early closing on Saturdays, but, *more suo*, could not trust themselves to carry it out without legislation. Unfortunately the Government of India refused to sanction the passing of a Resolution by

the provincial Government under the Factory Act and the matter was dropped. Only a year or two ago the Jute Mills Association in despair brought out an American business expert, Mr. J. H. Parks, to advise them on the possibility of forming a jute trust with a view to exercising some control over the production and price of jute. Mr. Parks came, and wrote a report which the Association promptly pigeon-holed because the slump was over and the demand was so prodigious that there was no need to worry about the price of jute.

An Association, styled the **European Jute Dealers Association**, has lately been formed in Calcutta to promote and to guard the common interests of its members as dealers in jute for local consumption. The members are balers and brokers of jute for sale to the jute mills in and around Calcutta. Committee:—Mr. R. L. B. Gall, *Chairman*, Members:—Messrs. G. S. Alexander, P. E. Suttle, G. Morgan, C. D. Stewart, and A. Tosh.

**Effect of the War.**—The official review of the trade of India in 1914-15 says:—It will be remembered that among the circumstances which added materially to the rapid development of the world's jute industry were the Crimean war in 1854-56, and the Civil War in America in 1861-63. It was anticipated that the outbreak of war that history would itself, and that there would be a large demand for manufactured jute, especially for military and transport purposes. This anticipation was fulfilled and by the end of the year under review Calcutta jute mills were never in a more prosperous state. The short time agreement among the Bengal mills to work five days a week from April 1914 came to a conclusion at the end of September. From the 3rd October the mills commenced a six day week, some of them on the full double shift of 134 hours and others on 11 hours single shift. The result of the exceptionally high level at which raw jute and jute goods had until then been ruling, had not only been to curtail the consumption of jute goods, but also to bring substitutes for jute such as textiles and textile, within

region of possibility. When, however, price of the raw material reached its lowest point, most of the mills took advantage of the season, and secured large stocks of cheap jute.

The demand for manufactured goods during the months of August and September not active, and as a consequence the mills were unable to sell goods against their purchases, later on the mills sold against their purchases at a large profit, especially after October, owing to the fact that during the latter part of the year a large amount of jute goods manufactured to an extent which had not been previously known in India, and it is likely that as long as the war continues the jute here will be kept fully employed.

### Hemp and Jute Substitutes.

Experiments have been made during the last few years by the Agricultural Department of Government of India with the **Deccan hemp** (*Hibiscus cannabinus*), which yields a fibre similar to jute. As a result, a new variety of plant, known as Type 3, has been obtained, which it is now proposed to introduce in several parts of India, and, as a beginning, variety is to be grown on a number of estates in Bihar. A sample of the fibre prepared by this variety by the usual methods of retting was 10 ft to 12 ft long, of an exceptionally colour, well cleaned, and of good strength as valued at £18 per ton with Binilpatam at £12 10s., and Bengal first mark jute at per ton. Deccan hemp has been grown extensively in Bombay, the Central Provinces, and Madras, where it is used for ropes cordage and also for the manufacture of a coarse sackcloth. A valuable feature of the hemp is its suitability for cultivation in such parts of India as are not suitable for jute.

As for the war, the United Kingdom's requirements of hemp were mainly supplied by the following countries in order of importance:—Philippine Islands, New Zealand, India, Japan, Italy and Germany. The opinion appears to be held that the effect of the war will be to cause very considerable changes in the character of the fibre market. There will probably be some difficulties, it is thought, in the preparation of the hemp crops of Russia and Hungary, it is not unlikely that the world will look to countries such as India for the supply of fibres which may be used as substitutes for the European varieties of hemp. There can be no doubt one of the early effects of the war was a sharp rise in hemp prices. As far as Indian hemp is concerned, values were persistently depreciated during the first six months of 1914 owing to the stocks held; but the closure of the Russian market on the outbreak of war resulted in a marked improvement in values, and there is a keen demand and a considerable rise in

### Government Scheme of Buying.

Towards the end of August 1915 it became known that an arrangement had been made by the Home Government under which Messrs. Ralli Brothers had been entrusted with the purchase of raw jute for Dundee mills making war bags. That is to say all the war bags and jute textiles being manufactured for Government by the Jute mills in Dundee were to be made from jute which would be supplied by Messrs. Ralli Brothers' Calcutta office. By this arrangement practically half the entire Calcutta to Dundee jute trade was taken out of the hands of a group of old-established all-British firms and handed over to Messrs. Ralli Bros. What this really meant was that Messrs. Ralli Bros., who in 1915 only shipped 134,000 bales to Dundee as against approximately 10½ lakhs of bales by British firms (these figures are based on the generally accepted estimate that Dundee takes 12 lakhs of bales a year) would in 1916 be given Dundee business to the extent of at least 5,00,000 bales.

The scheme was severely criticised in Calcutta and in the Press, both in India and England, and the Anchor-Brookbank Line refused to carry jute for Government unless the Government Buying Agency was in the hands of a purely British firm. But it was not until the end of October, after strong representations by the Government of India and the Secretary of State, that the contract was cancelled.

**The new jute Scheme**—It was then made known that the War Contracts Department, which had made the contract in the first place without consulting the Government of India, had accepted under certain conditions a scheme submitted by the Government of India on behalf of certain responsible British firms. This scheme provides for supplying the full amount of jute required for military purposes on similar terms to those previously arranged with Ralli Brothers. A Jute Commissioner was to be appointed in India to supervise the purchases of the various firms, and, by inspection of their accounts and supervision of their non-Government purchases, to secure that they are not unduly favouring private business. They are to charge for their own baling only actual net cost, plus establishment charges directly concerned with work of the press house. They are further to undertake to buy marks other than their own baling at prices not higher than jute of their own baling. The War Office will cable direct to the Jute Commissioner from time to time the quantity and grades to be purchased through the agent firms, to whom allotments will be made by the Commissioner so far as possible on the basis of their previous Dundee business.



# The Handloom Weavers.



**Booth Tucker.**

Next to agriculturists the handloom weavers of India are second in numerical importance among the skilled industrial workers. In round figures about 11 million souls are dependent on this industry. From a position of prosperity and even affluence they have suddenly been reduced, through no fault of their own, but by circumstances over which they have no control, and which it was impossible for them to foresee, to a condition of indigence and even starvation. Taking a superficial view of the situation one might be tempted to say that the remedy is in their own hands. Let them forsake their homes and take service in the mills and the problem will be solved. But this would be a short-sighted and unwise policy. There are fundamental objections to it which cannot be overlooked.

What the handloom industry of India calls for is not annihilation, but leadership. To invite a noble and ancient industry which has been for many ages one of the main bulwarks of India's prosperity voluntarily to commit "harakiri" is a height of self-sacrifice of which even Japanese models would hardly approve. The mill-owners of Lancashire would no doubt benefit greatly—at least for the time being—if they could persuade the foolish mill-owners of India that in view of Lancashire's superior skill, intelligence, education, capital or other causes, the latter ought promptly to commit suicide, and if they could persuade the Government of India that in bolstering up the industry in its unequal struggle they were embarking in a wasteful and useless expenditure of money and energy, and that their proper course would be to tax it out of existence, or at least abandon it to its fate!

## Training Schools.

Unfortunately in the case of the voiceless handloom weavers the mill interests have to a large extent overpersuaded Government that it is useless to help them to sustain the unequal struggle. Nearly every handloom weaving school in India and elsewhere has sooner or later been converted into a training school for mill foremen and managers, aspiring to salaries of from Rs. 50 to Rs. 500. What wonder when it is remembered that the managers of these institutions have been almost without exception themselves trained in mill schools to mill methods, and have become accustomed to look down upon the handloom industry, and to regard it as being doomed to extinction.

Similarly, when Government have appointed experts, or committees, to investigate the question and to report on the advisability and best means of helping the handloom weaver, to whom has the duty been entrusted? Almost invariably to mill experts, whose verdict has been a foregone conclusion. They might well have saved themselves the trouble and expense. I have sometimes written to such persons myself and urged them to confer with our own experts, who have been engaged in the exclusive study of the problem for the last 7 or 8 years, or to allow me an opportunity

of presenting personally the handloom weavers' side of the story, and almost without exception they have been too busy, or have not been able to visit the centres suggested, or have paid them a cursory and contemptuous call, while a more or less one-sided report has been presented, which has frequently resulted in Government withholding its much-needed help from this struggling community and further generously subsidising the wealthy mill-schools!

Not that the two interests are necessarily opposed to each other, any more than are the Infantry and Cavalry of an army in the field. While Indian mills are looking abroad for markets for their yarn, the 11 million skilled weavers at their door are well worthy of their consideration and should form the most valuable market for their output. Mills that will study the requirements of this home field need not look outside the four corners of India for many a year to come.

## What is wanted.

What the handloom weavers of India need is:—

1. Leadership. They are like sheep without a shepherd. The few leaders that have hitherto been supplied them have too often been wolves in sheep's clothing, who have failed either to understand their needs, or win their confidence.
2. The second great need is instruction in improved methods.
3. The weaver must also be placed in touch with the markets of the world.
4. This will involve a generous expenditure of money by Government in doing for the weaver what he obviously cannot do for himself. But the outcome will abundantly repay the outlay.

Properly led, properly instructed and properly connected with the world's great cloth bazaar, the weaver of India may yet again become India's pride, and the merchants of the world may yet again vie with one another in seeking the products of his age-learned skill.

The task is not nearly so difficult as it seems. The machinery exists, but needs extension and expansion. There are some things which the weaver can, must and will do for himself. There are other things which must be done for him.

## Leadership.

1. He must be supplied with Leaders who know his needs and in whom he can safely trust. These leaders ought not, save under exceptional circumstances, to be chosen from his rivals. The mill-trained expert is, as a rule, of very little use to him and is often a positive source of danger. The leaders whom he needs must be in thorough sympathy with his cause, must understand his conditions, must include those who are able themselves to handle the shuttle and must not be mere students and theoreticians. And here I would like to say that it is highly dangerous for a

Presidency, or State to allow its policy towards the handloom weaver to be dictated by a young graduate from a mill school. We should not dream of putting the cleverest University Graduate to fill the chair of a Commissioner or to dictate the policy of Government, because he had gained honours in Political Economy, Science, Languages or other elements of knowledge. And yet in not a few instances the destinies of the vast weaving community have been entrusted to the guidance of the merest tyros in this difficult art! What wonder that the ship has soon been wrecked and consequently abandoned, and then the cause regarded as hopeless.

The great majority of these Leaders will have to be selected from the weavers themselves and not from callow unfledged students of the theory of their art.

### Suitable Schools Needed.

2. Therefore they must have suitable Schools. I say suitable, because many of the schools established for their benefit have been anything but suitable. Frequently it has been necessary to close them for this very reason. The founder of one such brought the Governor of his Presidency to warn the weavers that if they failed to drink at the fountain of textile knowledge which Government had at great expense established for them, it would be his painful duty to stop its unvalued flow. One man could lead them to water, but even a Government could not force the unwilling horse to drink. Soon afterwards the Institution was closed, and the weavers of course were blamed for their stupidity.

By a suitable school I mean,

(1) A school that is under the sympathetic management of a leader who understands the weavers' needs and can win their confidence.

(2) A school in which the teachers can themselves weave and can consequently be looked up to by the weavers

(3) A school exclusively for weavers and not for mill-students, nor a combination of the two. A school in which the adult weaver is taken by the hand and taught improved methods. His advice, assistance, suggestions and objections should be encouraged, and he should be given the free opportunity to choose for himself the kind of implements, materials and methods which he himself may prefer, within, of course, reasonable limits. He may not be able to read, or write, but when it comes to questions of his own particular art, he will usually exhibit a shrewdness, alertness and common-sense, which should be developed and encouraged.

(4) Being a family man, the adult weaver must receive such remuneration as he may require for the support of his family, while learning improved methods.

(5) The school must be in close touch with the world's markets and must teach the weaver the kinds of cloth that it will pay him to make. The weaver is keenly awake to the commercial side of his undertaking, and will appreciate such assistance. The mere theoretical pedagogue is bad enough in an ordinary educational

system, stuffing too often our children's heads with useless knowledge, but in a weaving school he spells blue ruin to its best interests,

(6) The weaver ought to be helped by means of loans and time payments to become the owner of the improved implements of which he has been taught the use, should he so desire. He should be allowed to select those which he himself prefers and should be enabled to pay for them by instalments.

(7) Travelling branches should be established which can go from village to village at regular intervals, explaining methods, inviting criticisms, establishing centres and helping to market the produce of the weavers, and to obtain for them good yarn at reasonable prices.

### Marketing of Produce.

3. The marketing of produce is not so difficult as might at first sight appear. Each centre should gradually work up a market of its own, and when one line ceases to yield a reasonable profit, another should be substituted; as the weavers become better organized and trained, the market will gradually run after them.

We have ourselves established in connection with our various weaving schools a trading agency which takes over the whole of their output, and whose business it is to find out what the markets require. It works on a strictly business basis and greatly facilitates the working of our schools.

It is now some eight years since the Salvation Army took up the cause of the handloom weavers of India, and I think that we may claim to have gained a thorough working knowledge of their needs, and to have largely won their confidence.

One of our Officers has invented a loom which has been generally accepted as the best and fastest handloom in existence. What is even more important, it works so easily that a child can use it. Thus all the members of a weaver's family can work it in turn and bring their output almost to a level with that of a mill. Fast days for throwing the shuttle can be obtained from Rs. 7, and upwards, and the complete loom from Rs. 35 and upwards.

A fast loom is of no use to a weaver without a warping machine that can turn out long warps. For this we have a very simple device suitable for village use. One warping machine can keep some twenty fast looms supplied with warps. The cost of this machine is only Rs. 35.

The preparation of thread from cotton, wool, or silk has also received our attention, and improved methods have been introduced which are greatly appreciated by the weavers and villagers. Improved spinning and reeling machines can be obtained for Rs. 15 and upwards.

The price of the implements has been brought down to the lowest point consistent with good workmanship and materials. The strain upon a fast loom is very severe, and unless it is well made it soon goes to pieces. The weavers themselves well understand this and prefer a good machine, even if it costs more.

## Silk.

In the early days of the East India Company the Indian Silk trade prospered greatly, and various sub-tropical races of the Silkworm were introduced. But the trade gradually declined for the following reasons:—

In the seventeenth and eighteenth centuries India's chief competitor in the silk trade was the Levant Company. Successful efforts, however, were made to acclimatise in Europe one or two races of a temperate worm, procured from China and Japan. When sericulture became part of the agriculture of France and Italy, a quality of silk was produced entirely different from that of India and Turkey, and its appearance created a new demand and organized new markets.

All subsequent experience seems to have established the belief that the plains of India, or at all events of Bengal, are never likely to produce silk that could compete with this new industry. On the lower hills of Northern India, on the other hand, a fair amount of success has been attained with this (to India) new worm, as, for example, in Dehra Dun and Kashmir. In Manipur, it would appear probable that *Bombyx mori*, possibly obtained from China, has been reared for centuries. The caprice of fashion has, from time to time, powerfully modified the Indian silk trade. The special properties of the *korah* silk were formerly much appreciated but the demand for them has now declined. This circumstance, together with defective systems of rearing and of hand-reeling and weaving, accounts largely for the present depression in the mulberry silk trade of India.

**Mulberry-feeding worms.**—Sir George Watt states that in no other country does the necessity exist so pressingly as in India to treat the subject of silk and the silk industries under two sections, viz., Bombycidae, the domesticated or mulberry-feeding silk worms; and Saturniidae, the wild or non-mulberry-feeding worms. In India the mulberry worm (*Bombyx Mori*) has been systematically reared for many centuries, there being six chief forms of it. In the temperate tracts of India various forms of *Morus alba*, (the mulberry of the European silk-producing countries), are grown specially as food for the silkworm. This is the case in many parts of the plains of Northern India, Baluchistan, Afghanistan, Kashmir, and along the Himalaya at altitudes up to 11,000 feet. The other species even more largely grown for the Indian silkworm is *M. Indica* of which there are many distinctive varieties or races. This is the most common mulberry of Bengal and Assam, as also of the Nilgiri hills.

India has three well-known purely indigenous silkworms: the *tasar*, the *muga* and the *eri*. The first is widely distributed on the lower hills, more especially these of the great central tableland, and feeds on several jungle trees. The second is confined to Assam and Eastern Bengal, and feeds on the laurel. The third exists in a state of semi-domestication, being reared on the castor-oil plant. From an art point of view the *muga* silk is the most interesting and attractive, and the cocoon can be reeled readily. The *eri* silk, on the other hand, is so extremely

difficult to reel that it is nearly always carded and spun—an art which was practised in the Khasi Hills of Assam long before it was thought of in Europe.

**Experiments and results.**—Numerous experiments have been made with a view to improving sericulture in India. French and other experts are agreed that one of the causes of the decline of the silk industry in India has been the prevalence of diseases and parasites among the worms, the most prevalent disease being pebrine. M. Lafont, who has conducted experiments in cross breeding, believes that improvement in the crops will be obtained as soon as the fight against pebrine and other diseases of the worms is taken up vigorously by the producers of seed and the rearers of the worms, while improvement in the quality of the cocoons will be obtained by rearing various races, pure and cross breeds.

In Kashmir and Mysore satisfactory results have been obtained. In the former State sericulture has been fostered on approved European principles with Italian reeling machinery, seed being imported annually on a large scale. In 1897 in Mysore Mr. Tata, after selecting a plantation and site for rearing houses, sent to Japan for a Superintendent and trained operatives. The Mysore authorities have made a grant of Rs. 3,000 a year to the Tata farm in return for instruction given to the people of Mysore in Japanese methods of growing the mulberry and rearing the insects. The products of the Mysore State are exported to foreign countries from Madras. The work of the Salvation Army is also noteworthy in various parts of India. They have furnished experts, encouraged the planting of mulberry trees, and subsidised several silk schools. The draft prospectus has been issued of a silk farm and institute to be started at Simla under the auspices of the Salvation Army. The Lieut.-Governor of the Punjab has permitted the school to be called after his name, and the Punjab Government is making a grant of Rs. 2,000 this year towards the expenses. Sir Dorabji Tata has also made a donation of Rs. 1,000. The Bengal Silk Committee under the guidance of some French experts have conducted cross-breeding experiments with a view to establish a multivoltine hybrid of European quality. There is a Government sericultural farm at Berhampore, where, it is said, a pure white multi-voltine of silk worm is reared. The results of the Bengal Committee's labours may be summed up as follows: the only really effective method of dealing with the problem is to ~~work~~ <sup>bring</sup> up gradually to a point at which the whole of the seed cocoon necessary for the province will be supplied to rearers under Government supervision, and to establish gradually a sufficient number of large nurseries throughout the silk districts of the province.

In 1915 there was issued by the Agricultural Research Institute, Pusa, a Bulletin (No. 48 of 1915) entitled "First Report on the Experiments carried out at Pusa to improve the Mulberry Silk Industry." In a short Prefatory note Mr. Bainbridge Fletcher (Imperial Entomo-

gist) explains that the object of the Bulletin is to place on record some of the more important experiments which were commenced at Pusa in the year 1910 and have since been carried on in the endeavour to fix a superior multivoltine race of the Mulberry Silkworm which would not degenerate and which would yield silk better both in quality and outturn than that supplied by the multivoltine races which are reared at present.

**Central Nurseries.**—The report of the Agricultural Department, Bengal, for the year ending June 30, 1913, gives an account of a scheme which has been devised with the object of reclaiming the silk industry. The aim of the scheme is gradually to establish throughout the silk districts a sufficient number of central nurseries with rearing houses and thus enable the whole of the seed cocoons required in the province to be supplied under Government supervision. It is believed that this is the only really effective method of dealing with the problem. A number of the existing smaller nurseries were closed during 1913 and others are being converted into enlarged and improved central nurseries with rearing houses complete. The ultimate success of the scheme depends largely on the willingness of the rearers to pay an adequate price for pure seed.

A pamphlet was published in 1915, by Mr. M. N. De, Sericultural Assistant at Pusa, which contains practical hints on improved methods which are recommended to be used for reeling mulberry silk in Bengal and other silk producing districts. It has been found that, by the provision of two small pulleys to the ordinary Bengal type of reeling machine, superior thread can be obtained, the cost of the extra apparatus is merely nominal (five or six annas per machine), whilst the suitability of the machine for cottage

workers is maintained. By attention to such simple points as the stifling and storage of cocoons and the temperature and quality of the water used in the reeling pans, great improvements can be effected in most silk centres in Bengal and other districts.

**Exports of Silk.**—As a result of the war the trade has showed in some degree signs of revival from its decadent condition, both as regards its volume and value. The value of exports during 1915-16 improved by Rs. 12 lakhs to Rs. 27½ lakhs, of which raw silk accounted for Rs. 24 lakhs. Raw silk exports, both from mulberry and non-mulberry feeding silk worms, advanced by 42,454 lbs or 51 per cent. and Rs. 4½ lakhs or 53 per cent. to 125,166 lbs. and Rs. 12½ lakhs, the declared value per lb. of raw silk rising from Rs. 9-10-7 to Rs. 9-12-4; and chasam (waste) and cocoons from 433,570 lbs and Rs. 4 lakhs to 1,137,637 lbs and Rs. 12 lakhs. The increase in total exports was due to larger shipments to the United Kingdom, France, and Italy.

The export of silk manufactures in 1914-15 was valued at Rs. 3½ lakhs.

**Imperial Silk Specialist.**—At the end of 1915 it was decided that the first step to be taken to revive the silk industry should be the employment of a qualified expert who, after a careful study of the conditions not only in India but in other silk-producing countries, will formulate recommendations for the consideration of Government. With the approval of the Secretary of State, Mr. H. Maxwell Lefroy, formerly Imperial Entomologist and now Professor at the Imperial College of Science and Technology, South Kensington, has been appointed to the temporary post of Imperial Silk Specialist.

## Indigo.

Indigo dyes are obtained from the Indigofera, a genus of Leguminosae which comprises some 800 species, distributed throughout the tropical and warm temperate regions of the globe, India having about 40. Western India may be described as the headquarters of the species, so far as India is concerned, 25 being peculiar to that Presidency. On the eastern side of India, in Bihar, Bengal, Assam and Burma, there is a marked decrease in the number of species but a visible increase in the prevalence of those that are met with.

There is evidence that when Europeans first began to export the dye from India, it was procured from the Western Presidency and shipped from Surat. It was carried by the Portuguese to Lisbon and sold by them to the dyers of Holland, and it was the desire to obtain a more ample supply of dye stuff that led to the formation of the Dutch East India Company and so to the overthrow of the Portuguese supremacy in the East. Opposition to indigo in 17th century Europe was keen owing to its interference with the wool industry, but it was competition to obtain indigo from other sources than India that led to the first decline of the Indian indigo industry. In the middle of the eighteenth century, when the cultivation of indigo in the West Indies had been given up—partly on account of the high

duties imposed upon it and partly because sugar and coffee were found to be more profitable—the industry was revived in India, and, as one of the many surprises of the industry, the province of Bengal was selected for this revival. It had no sooner been organised, however, than troubles next arose in Bengal itself through misunderstandings between the planters, their cultivators and the Government, which may be said to have culminated in Lord Macaulay's famous *Memorandum* of 1837. This led to another migration of the industry from Lower and Eastern Bengal to Tirhut and the United Provinces. Here the troubles of the industry did not end, for the researches of the chemical laboratories of Germany threatened the very existence of any natural vegetable dye. They first killed the madder dye of Europe, then the safflower, the lac and the al dyes of India, and are now advancing rapidly with synthetic indigo, intent on the complete annihilation of the natural dye. Opinions differ on many aspects of the present vicissitude; meantime the exports from India have seriously declined, and salvation admittedly lies in the path of cheaper production both in cultivation and manufacture. These issues are being vigorously faced and some progress has been accomplished, but the future of the industry can scarcely help being described as of great

uncertainty. The issue is not the advantage of new regulations of land tenure, but one exclusively of natural *versus* synthetic indigo. (See, *Indigo's* "Commercial Products of India.") In January 1915 a conference was held at Delhi on the possibility of assisting the natural indigo industry was considered from three points of view—agricultural, research and commercial. The agricultural or botanical side of the question is fully discussed by Mr. and Mrs. Howard of Pusa in Bulletins Nos. 51 and 54 of the Agricultural Research Institute. Perhaps the most important problem for the natural indigo trade to solve is the marketing of the dye in the form most suited to the dyers. Bihar indigo, according to a British Dyer whose views are entitled to respect, dyes a fuller shade than either synthetic indigotin or indigos refined from plant-indigos. It is further stated that 60 per cent. of Bihar indigo dyes a fuller shade than 70 per cent. Dutch-Java.

**Decline of the Industry.**—Since synthetic indigo was put upon the market, in 1897, the natural indigo industry of India has declined very rapidly; apart from slight recoveries in 1906-07 and 1911-12, the decline continued without a break until the revival due to the impossibility of obtaining artificial dyes in sufficient quantities during the war. The figures for the last few years may be contrasted with those for the five years ending in 1897, in which the area under indigo averaged 2,400 square miles and the value of the exports over £3,000,000 a year.

—	Area under Indigo.	Quantity Exported.	Value of Exports.
	Acres.	Cwts.	£
1901-02 ..	791,000	89,750	1,234,837
1902-03 ..	646,000	65,377	803,738
1903-04 ..	707,000	60,410	717,408
1904-05 ..	477,000	40,252	556,405
1905-06 ..	384,000	31,186	390,918
1906-07 ..	421,000	35,102	466,985
1907-08 ..	394,000	32,400	424,849
1908-09 ..	284,000	24,940	326,986
1909-10 ..	289,000	18,061	234,544
1910-11 ..	276,000	16,939	223,529
1911-12 ..	271,000	19,155	250,535
1912-13 ..	220,000	11,867	147,000
1913-14 ..	176,000	10,939	142,000
1914-15 ..	148,400	17,142	569,940
1915-16 ..	311,800	41,912	1,385,128

**Present Position.**—The crop is most important in Bihar and Madras; in the Punjab and United Provinces it now occupies little over 100 square miles altogether. In Bengal the crop is largely raised by British planters, in the other provinces chiefly by native cultivators. Scientific research work on questions connected with cultivation and manufacture has been carried out by the Bihar Planter's Association, with the aid of a grant from Government since 1897.

**Prices.**—The average declared value per cwt. has largely risen, owing to the War. In 1913 it was Rs. 188-1; in 1914, Rs. 349-15; and in 1915, Rs. 492-8.

**Crop Forecast.**—The Director of Statistics in his first memorandum on the crop for the season 1916-17 states that the total area sown is estimated at 625,900 acres as against 258,100 acres estimated last year, or on increase of 142 per cent. which is generally attributed to the high prices of indigo owing to the war. As compared with the final figures of last year (314,300 acres), the present estimate shows an advance of 99 per cent. All the provinces show an increase in the area sown, the largest increase being in the United Provinces and Madras. The season has, on the whole, been favourable, except in Madras and the eastern districts of the United Provinces. In these tracts the crop has been adversely affected by heavy rainfall. Details for the provinces are given below;—

Province.	Area in acres (First forecast).		Provisional estimate of yield in cwts.	
	1916-17	1915-16	1916-17	1915-16
	Acres.	Acres.	Cwts.	Cwts.
Bihar and Orissa ..	76,500	60,800	10,800	7,300
Madras ..	344,300	126,000	40,000	24,000
Punjab ..	44,900	18,500	7,000	1,800
United Provinces ..	150,300	40,500	16,000	4,000
Bombay and Sind (including native States) ..	7,700	4,700	1,200	1,200
Bengal ..	2,200	1,600	200	200
Total ..	625,900	258,100	75,200	38,500

## Tea.

Tea cultivation in India is chiefly in Assam, Bengal and Southern India, the cultivation elsewhere being comparatively unimportant. The latest available official general statistics are those for the year 1915 when a bumper crop was harvested. They show a total area of 636,200 acres under tea, which is 2 per cent. more than in 1914. Of this area, 584,900 acres were plucked in 1915. The total number of plantations was 4,437. The area under cultivation has increased in the last 10 years by 20 per cent. and the production by 55 per cent. The average production per acre for the whole of India, excluding Burma (where the produce of the tea gardens is almost wholly converted into wet pickled tea, which is eaten as a condiment) was 637 lbs. in 1915 as compared with 554 lbs. in 1914.

## Area and Production.

The total area under tea in 1915 was divided between the different Provinces as follows:—

Assam—	Acres.
Brahmaputra Valley .. ..	237,517
Surma Valley (Cachar and Sylhet).	146,304
<b>Total, Assam .. ..</b>	<b>383,821</b>
Bengal .. ..	161,306
Bihar and Orissa (Chota Nagpur) ..	2,158
United Provinces .. ..	7,946
Punjab .. ..	9,875
Nadras .. ..	27,625
Mysore and Cochin .. ..	40,656
Burma .. ..	2,836
<b>Grand Total .. ..</b>	<b>636,218</b>

The total production in 1915 was 371,836,668 lbs., divided between the different parts of India as follows:—

	Lbs.
Assam .. ..	245,385,920
Bengal .. ..	89,526,057
Southern India .. ..	31,610,367
Northern India .. ..	4,875,583
Bihar and Orissa .. ..	293,207
Burma .. ..	145,534
<b>Total .. ..</b>	<b>371,836,668</b>

## Exports.

The following were the exports of Indian tea by sea in 1915-16:—

	Lbs.
United Kingdom .. ..	250,290,291
Russia .. ..	36,590,118
Other European Countries .. ..	231,590
Egypt .. ..	994,973
Elsewhere in Africa .. ..	1,365,150
Canada .. ..	8,842,185
U.S.A. .. ..	3,442,968

	lbs.
Rest of America .. ..	953,700
Ceylon .. ..	4,806,822
China .. ..	9,864,596
Asiatic Turkey .. ..	2,227,150
Persia .. ..	6,875,565
Rest of Asia .. ..	2,814,201
Australasia .. ..	9,590,672

**Total by Sea .. 338,490,187**

The exports by land were as follows:—

Afghanistan .. ..	555,632
<b>Total by land .. ..</b>	<b>1,942,976</b>

The sea and land exports together make, therefore, a Grand Total of .. .. 840,433,163

The total quantity of Indian tea imported into the United Kingdom is not consumed there, a considerable portion being re-exported. The re-exports of Indian tea from the United Kingdom in the past five years have been as follows:—

1911 .. ..	17,997,000 lbs.
1912 .. ..	19,368,000 "
1913 .. ..	21,830,000 "
1914 .. ..	30,399,000 "
1915 .. ..	24,640,766 "

The largest quantity of re-exports last year went to Denmark, which took 4,753,450 lbs. against 2,014,303 in 1914 and 764,954 in 1913. Next came Canada, then Holland, the United States and the Union of South Africa. It was discovered in 1914 that the ultimate destination of the tea sent to the principal customers—Holland and Denmark—was Germany and Austria. Germany is not a tea drinking nation, but her troops wanted it. Government first placed an embargo on these re-exports, but as it was proved that Holland could supply Germany with any quantity of tea from Java the embargo was withdrawn.

## Features of the Trade.

The most striking features of the trade in 1915-16 are the following. The special feature of 1914, namely, a large outturn coupled with high prices, also characterised 1915. The total exports by sea and land improved by nearly 88 million pounds or nearly 12.5 per cent. as compared with 1914-15. Shipments to the United Kingdom, to which over 73 per cent. of the exports of tea is directed, increased by 12,986,000 lbs., or 5.5 per cent. Russia, which is the second best customer of India tea in Europe, took 14 million pounds more than in 1914-15—a remarkable recovery. On the other hand, exports to France and Italy decreased by 378,000 lbs. and 67,000 lbs. respectively, not to speak of countries to which export was prohibited. The total exports to Europe, excluding the United Kingdom, showed a net increase of 16,269,000 lbs. as compared with the year 1914-15. Owing to the lateness of the crop and freight difficulties, much tea remained for shipment at the close of the year.

## QUANTITY OF EXPORTS.

The following table shows the quantity of Tea exported by sea and by land to Foreign Countries from India, Ceylon, and China, in the years 1896-97 to 1915-16, with variations in index numbers, taking the figure of 1896-97 as 100 :—

	India.			Ceylon *		CHINA †	
						Black and green.	Brick, tablet & dust.
	lbs.			lbs.		lbs.	lbs.
1896-97	150,421,245	[100]		110,095,194	[100]	161,538,933	78,567,333
1897-98	152,344,905	[101]		114,460,318	[104]	137,097,600	75,781,867
1898-99	158,539,488	[105]		122,305,518	[111]	147,967,200	68,017,067
1899-1900	177,163,999	[118]		129,661,908	[118]	153,669,067	71,205,067
1900-01	192,300,658	[128]		149,264,603	[136]	144,270,933	52,190,667
1901-02	182,594,356	[121]		144,275,608	[131]	119,390,000	42,740,533
1902-03	183,710,931	[122]		150,829,707	[137]	128,226,933	78,512,400
1903-04	209,552,150	[139]		149,227,236	[135]	140,607,867	83,813,600
1904-05	214,300,325	[142]		157,929,333	[143]	132,366,933	61,493,733
1905-06	216,770,366	[144]		171,256,703	[156]	112,152,533	70,784,267
1906-07	230,000,328	[157]		171,558,110	[156]	108,864,534	79,506,133
1907-08	228,187,826	[151]		181,126,298	[164]	130,022,266	84,940,000
1908-09	235,089,126	[156]		181,430,718	[165]	120,265,733	80,885,733
1909-10	250,521,064	[167]		189,385,924	[172]	120,174,800	79,617,000
1910-11	256,438,614	[170]		186,925,117	[170]	123,947,734	84,158,943
1911-12	263,515,774	[175]		184,720,534	[168]	137,788,933	57,251,467
1912-13	281,815,329	[187]		186,632,380	[169]	127,826,800	69,733,200
1913-14	291,715,041	[194]		197,419,430	[179]	103,038,000	70,061,600
1914-15	302,556,697	[201]		191,838,046	[174]	114,689,200	84,307,733
1915-16	340,438,163	[226]		214,900,383	[195]	143,662,000	93,776,067

The following statement illustrates the variations in prices of the three principal grades of tea sold at the auction sales in Calcutta in 1888 and the six years ending 1915, the average price of 1901 to 1910 being taken as 100 in each case. The figures represent the average of the prices per pound of tea from all districts at each sale :—

Year.	Broken Pekoe.		Pekoe.		Pekoe Souchong.		Average for all description.	
	Price.	Variation.	Price.	Variation.	Price.	Variation.	Price.	Variation.
	As. p.		As. p.		As. p.		As. p.	
1888 .. ..	10 3	155	8 1	137	6 3	123	8 8	124
1910 .. ..	7 3	110	7 0	119	6 4	125	7 10	112
1911 .. ..	7 9	117	7 7	129	6 9	133	7 11	113
1912 .. ..	7 5	112	6 11	114	5 9	113	7 8	110
1913 .. ..	8 1	122	7 5	126	6 10	135	8 2	117
1914 .. ..	7 10	119	7 8	130	6 11	136	8 3	118
1915 .. ..	9 1	138	8 0	144	7 10	154	9 5	135

\* The figures for years previous to 1905-06 relate to the calendar year as it has been found impossible to procure complete data for the official year.

† For calendar year.

The following table shows the quantity of Indian tea, green and black, available for consumption in India during the years 1909-10 to 1915-16 :—

Year.	Lbs.	Year.	Lbs.
1909-10 .. ..	13,477,297	1913-14 .. ..	22,797,000
1910-11 .. ..	14,224,808	1914-15 .. ..	19,290,819
1911-12 .. ..	15,294,472	1915-16 .. ..	41,311,900
1912-13 .. ..	19,805,550		

## Capital and Labour.

The number of persons employed in the industry in 1915 is returned at 608,105 permanently employed, and 90,220 temporarily employed. Compared with the returns of the previous year, there is an increase of 20,207 permanent employes and of 1,618 in the number of temporary hands. The capital of joint stock companies engaged in the production of tea amounted to over Rs. 31 crores or about £20·7 millions, viz.—

Rs.

Companies registered in India .. 4,58,69,333

Companies registered in the United Kingdom (£17,670,760) 26,50,61,400

The Government of India's report on the production of tea in India in 1915, which contains the latest available official returns, states that of 111 companies registered in India, which have an aggregate paid-up capital of Rs. 3,26 lakhs, 89 declared dividends for 1914, amounting to 16·3 per cent. on the aggregate capital of Rs. 2,71 lakhs; 98 companies have up to now declared dividends for 1915, amounting to 26·1 per cent. on their aggregate capital of Rs. 2,96 lakhs. The value per Rs. 181 of joint stock capital as calculated on the prices of the shares of 95 companies quoted in the Calcutta share market was Rs. 181 in March 1915, and of 104 companies was Rs. 216·4 in March 1916. Similar details are available regarding 68 companies registered in the United Kingdom with sterling capital of £10·4 millions (Rs. 15,65 lakhs). The total dividends declared in 1914 by 66 companies out of them with an aggregate capital of £10·4 millions (about Rs. 15,60 lakhs) amounted to 13·8 per cent. In 1915 the dividends so far declared by 36 companies come to 14 per cent. on their aggregate capital of about £7·5 millions (Rs. 11,25 lakhs). Messrs. Barry and Co. of Calcutta issued in June 1916 a summary of the audited accounts for the past year of 107 joint stock tea companies incorporated in Calcutta, representing a total paid-up capital of Rs. 3,22,46,490. It shows a surplus on the year's working, exclusive of commission on profits and debenture interest, of Rs. 1,27,00,000, the average profit being 89·4

per cent. on the capital involved. Out of the above sum dividends have been paid representing an average return to shareholders of 26·4 per cent.

The prospects of the tea industry continue bright in spite of the enhancement of the customs duty in the United Kingdom and of the imposition of an export duty in India. The forced restriction of intoxicants in all allied countries has an appreciated influence on tea consumption. Tea is also highly appreciated by the troops, and as a good article has been supplied to them the influence on their various peoples can scarcely fail to be permanent. It is feared that freight is likely to have more bearing than ever on the course of prices this season. Tonnage is scarce, and until the cessation of hostilities must be increasingly so. Nevertheless, exports of Indian tea by sea from British India in the four months (April to July) of 1916, the latest period for which returns have at the time of writing been compiled, are 37 per cent. higher than in the corresponding period of 1915. This increase may not, however, be due to a larger crop, but to the surplus of the previous year's teas.

Java has lately become a formidable competitor in the world's tea markets, since she is not only increasing her production of tea but improving its quality, and her methods of production are now forcing attention to the extent of being held up for imitation. It is also feared in some quarters that Russia, which, owing to the abolition of *vodka*, has recently had to pay substantial sums for tea, may very well desire to cultivate her own tea industry, especially as the country contains suitable climate and soil.

Although the results of the Calcutta sale of the 1915-16 season up to the end of July 1916 did not compare very favourably with those of the corresponding period of the previous season, a glance at the result of the sales of the corresponding period of 1914, i.e., preceding the outbreak of war, proves reassuring. The average price realised in the present year has been 8 annas 11 pies, as against an average of 7 annas 11 pies in the corresponding period of 1914.

## Coffee.

The history of the introduction of coffee into India is very obscure. Most writers agree that it was brought to Mysore some two centuries ago by a Mahomedan pilgrim named Baba Budan, who, on his return from Mecca, brought seven seeds with him. This tradition is so universally believed in by the inhabitants of the greater part of South India, that there seems every chance of its being founded on fact. About the beginning of the 19th century there is no doubt coffee had found its way to India, and in 1823 a charter was granted to Fort Gloster, near Calcutta, authorising it to become a cotton mill, a coffee plantation and a rum distillery. Some of the coffee trees planted in fulfilment of that charter are supposed to be still alive, and about the same time coffee was successfully grown in the Botanic Gardens,

Calcutta; but the industry of coffee planting nowhere found an abiding place on the plains of India but migrated to the hills of South India, in Mysore more especially, and thus into the very region where tradition affirms it had been introduced two centuries previously.

The first systematic plantation was apparently Mr. Cannon's near Chikmagalur. This was established in 1830. It is supposed, however, that Major Bevan may have actually grown coffee on the Wynad at a slightly earlier date and that Mr. Cockburn's Shevaroy plantation bears the same date as Mr. Cannon's. In 1840 Mr. Glason formed a plantation at Manantoddy, and in 1846 plantations were organised on the Nilgiri hills.

The Position of the Industry.—The reported area under coffee has shown a continuous diminution since 1896.



The following table shows the area, in acres, under coffee in the different Provinces and States :—

Provinces and States.	1911-12	1912-13	1913-14
Madras .. ..	51,127	49,287	43,522
Bombay .. ..	72	51	51
Upper Burma ..	60	60	70
Lower Burma ..	3	4	4
Assam .. ..	1	1	..
Cooch .. ..	43,313	42,510	42,076
Mysore .. ..	107,058	105,875	107,452
Cochin .. ..	2,725	8,218	2,509
Travancore ..	10,457	10,393	7,993
Total .. ..	214,816	216,380	203,677

It is reported that in some of the coffee-growing districts coffee is giving way to tea, or, where the altitude is not prohibitive, to rubber. The advent of large supplies of cheap Brazilian coffees in the markets of Europe has, by bringing down prices, no doubt injured the coffee industry of India very seriously;

but the following figures of export trade show no marked change in the position since 1902 :—

	Cwts.
1902-03 .. ..	269,165
1903-04 .. ..	291,254
1904-05 .. ..	329,647
1905-06 .. ..	300,182
1906-07 .. ..	228,094
1907-08 .. ..	244,234
1908-09 .. ..	302,022
1909-10 .. ..	232,645
1910-11 .. ..	272,249
1911-12 .. ..	241,085
1912-13 .. ..	267,000
1913-14 .. ..	260,000
1914-15 .. ..	230,000

The exports to the United Kingdom have in the last few years fallen off considerably, there has been a great diminution in the trade with France, but exports to other Continental countries have shown some increase. No estimate of the quantity of coffee consumed in India can be given. The total export in 1915-16 was 177,000 cwts.

## OILS AND OIL CAKES.

The value of non-essential oil seeds exported from India in 1915-16 was 699,963 tons valued at Rs. 10,12 lakhs, a decrease of 882,678 tons and Rs. 15,55 lakhs compared with the previous year. A pamphlet on the subject recently published by the Commercial Intelligence Department points out that it is both economically and industrially unsound for India to export her oil seeds instead of manufacturing the oil & oil cakes in India. It allows other countries to reap the manufacturers' profits and at the same time deprives Indian agriculture of the great potential wealth, as cattle-food and manure, contained in the oil cakes. An immense quantity of oil is, as a matter of fact, already manufactured in this country by more or less crude processes. Village oil mills worked by bullocks and presses worked by hand exist in all parts of the country and supply most of the local demand for oil. There has also been a great increase in recent years in the number of oil mills worked by steam or other mechanical power. These crush all the commoner oil seeds and development has been especially marked in the case of mustard oil, castor oil and groundnut oil. In spite of all this there has been a perceptible diminution in the export of oil from India, particularly of cocoanut oil and linseed oil, and an increase in the export of oil seeds, which is particularly marked in the case of copra and groundnuts. The situation created by the War has naturally led too much discussion of the possibility of developing on a large scale the existing oil-milling industry in India.

There are three difficulties with which any proposal to develop in India an oil-milling industry on a great scale is faced. In the first

place, there exist high protective tariffs in European countries which encourage the export from India of the raw material rather than the manufactured product. Secondly, there is a better market for the oil cake in Europe than in India and the freight on oil seeds is less than the freight on cake. Thirdly, it is much easier and less expensive to transport oil seeds by sea than it is to transport oil. While this has been the position in the European markets, Indian made oils, other than cocoanut oil, have made enough headway in Eastern markets to suggest the possibility of a development of those markets.

The problem of finding a market for oil cakes is equally important. The value of oil cakes is much better appreciated in Europe than in India. The Indian cultivator is prejudiced against the use of machine-made cake as a cattle food or as manure because he considers that it contains less oil and therefore less nourishment than the village-made cake. He is therefore unwilling to buy it except at a reduced price. His prejudices on this point have no justification in fact since experts are agreed that mill cake is a better food for cattle than village-made cake. Even when the mill cake contains less oil than the village cake, there is still more oil in the cake than cattle can digest. The excess of oil in the village cake, where it exists, is a drawback and not an advantage to the use of the cake as food. A considerable amount of demonstration work has been done by the Agricultural Departments of Government in order to remove the cultivator's prejudices and there is said now to be an increasing demand for most classes of mill cake.

## The Forests.

The necessity of protecting the vast forest areas in India and Burma was first recognised in the Madras Presidency nearly a century ago, when steps were taken to protect on a limited scale the more valuable areas in the Anamallis, while in December 1886 Doctor Cleghorn was appointed the first Conservator of Forests in that Presidency. It was not, however, until 1856 that Lord Dalhousie laid down a definite policy with the object of affording more widespread protection to the vast areas of valuable forest in British India. The action taken by the Supreme Government came none too soon, for already in many localities the wanton hacking by the local population and even more so by timber contractors, had reduced the forests to a state from which they could not be expected to recover for many years, even under the strictest protection.

### Recruitment of the Staff.

In order to introduce a system of conservative management on scientific lines it was of first importance to collect a staff of trained foresters, and as no forest training college existed at that period in England, the Government of India, as a commencement, enlisted the services of three German Forest Officers. The first of these to come to India was the late Sir Detrich Brandis, K.C.I.E., F.R.S. and it was to his extraordinary energy and abilities that a sound foundation was originally laid to the scientific management of the State forests. Soon after his arrival in India, the staff was materially strengthened by the recruitment of officers from the Indian Army. In 1869 the first batch of technically-trained English forest officers joined the service, having received their training either in Germany or France, and this system of continental training remained in force until 1876, after which the training was carried on entirely at the National Forest school of Nancy. The first batch of Coopers Hill trained foresters arrived in India in 1887 and the last in 1907, after which date the training took place at Oxford University, and later also at the Universities of Cambridge, Edinburgh and Dublin. In this way the Government of India have been able to collect by degrees a highly trained staff of men to carry on the administration of their State forests. The total strength of the Imperial Establishment at the present time is 237, of whom 29 are administrative officers and 219 Executive officers, among the latter are included Instructors and Research Officers who are employed at the Forest Research Institute, Dehra Dun.

In order to keep pace with the recruitment of the superior staff, a Forest School was opened in 1878 at Dehra Dun for the training of Forest Rangers. Recently this School has been converted into a College and the instruction extended to include a course for training men for the Provincial Services. Besides the Forest College at Dehra two new Rangers' Schools have been established, one at Pynmana in Burma and the other at Coimbatore in Madras. Besides this nearly every Province has established a local Forest School for the training of the lower subordinate establishment.

### Area of State Forests.

The forests belonging to the State covered in 1914-15, 249,867 square miles, or roughly one-fourth of the whole of India and Burma. Of this 97,580 square miles are Reserved Forests, 10,405 square miles Protected Forests and 141,882 square miles Unclassed forests, by far the greater portion of the latter class occurring in Burma. The distribution of these areas is by no means uniform, the majority being found in Burma, Assam, Northern Bengal and along the foot of and extending into the Himalayas from the Nepal frontier westward through the United Provinces and the Punjab. In the Gangetic valley, in the plains of the Punjab, in Sind and Rajputana few forests occur except along the rivers, nor does one come across large wooded tracts until one enters the Central Provinces and the Godavari catchment area. From there southward in the Satpuras and throughout the North and South Deccan there exist well distributed areas of forests, though generally not in large blocks, while on the Western Ghats, in the Nilgiris and Anamallis, are found some of the finest teak forests of India proper. The East Coast of India is fairly well stocked with forest growth, especially in the Godavari basin, to the west of Cuttack and Puri and again in the Sundarbans, while the Andaman Isles are densely wooded.

### Revenue, Expenditure and Outturn.

The gross Revenue from State forests in 1914-15 amounted to Rs. 2,89,82,953, while the expenditure stood at Rs. 1,80,33,185, giving a net revenue of Rs. 1,09,49,768. The total outturn of timber and fuel in that year amounted to 270 million cubic feet, out of which 22,71,655 cubic feet of fuel and 9,78,430 cubic feet of timber were given free or at reduced rates. The bamboos removed were valued at 11 lakhs of rupees, while the total revenue derived from Minor Products was 107 lakhs of rupees.

From the above figures it will be readily understood that not only is the revenue realised by the State considerable but that the handling of such large amounts of Forest Produce requires a competent staff of officers.

### Management.

The system under which the State forests are managed varies in different Provinces. In all cases, however, the aim of the Forest Department has been to introduce Working Plans for their forests, based on European systems of management. The system most usually adopted in India, especially for working the valuable teak and sal forests, is the Selection System, in other words maintaining an equal distribution of all age classes throughout the forest. In a few cases such as in deodar and other coniferous forests and also in a few instances in sal forests, the Uniform Method or a system by which trees of more or less uniform age are grouped together has been applied, and this method of mere intense

management may come into more general use in the future, as a greater number of trained officers become available. In many cases, owing to the destruction of the forests in the past, it has only been possible to prescribe improvement felling, though in time a more regular system of working will be introduced. The forests which are destined to supply small building timber and fuel to the local population are generally worked by either the Coppice with Standard or Pure Coppice methods, according to the state and composition of the forest, while certain areas have been put aside for the formation of Fuel and Fodder Reserves or as grazing areas.

#### Forest Surveys.

The preparations of maps for the State Forests is undertaken by the Great Trigonometrical Survey Department. The area for which detailed surveys have been prepared was roughly 80,902 square miles in 1911-12, to which figure yearly additions are being made. As soon as possible after the compilation of detailed maps, Working Plans are prepared for the forest, and up to 1914-15 about 52,867 square miles of Forests have been dealt with.

#### Method of Extraction.

Once the forests have been organized and plans of working prepared by an officer put on special duty for the purpose, it remains for the executive officers to arrange for the exploitation of the trees, according to the provisions of the sanctioned plans. This work is carried out in various ways in different localities. Sometimes it is done departmentally, as for instance in certain divisions on the West Coast and also in three or four of the western Pegu Yoma divisions, in Burma. This system which had to be adopted by the Department when work was first commenced and contractors could not be obtained, has now generally been replaced by a system of giving leases to work the forests or by selling the annual coupes standing to contractors. In the case of the valuable teak forests of Burma the system of granting leases for a period of from 10 to 20 years has generally been adopted and has been found to work satisfactorily, the trees for felling being marked by the Forest Department. In other provinces this system has been adopted on a more restricted scale, and in India proper the custom of holding annual sales and selling the trees standing has been found more convenient and profitable. The right to collect Minor Produce is generally put up for auction, which gives the highest bidder the right to collect the produce from the forest for a given period, generally one year. In order to meet the requirements of the local population a system of issuing permits is in force, the permit being issued free to right or privilege holders and on payment of a low fee to other persons. This enables agriculturists to obtain their requirements as to fuel, building timber and grass, etc., without delay and without having to pay enhanced rates to a middleman. The right to grazing is dealt with in the same way.

#### Important Timbers.

The forests of British India contain a vast number of trees and woody plants, in fact a far greater number than is generally realised

by the public. For instance the number of tree species is about 2,500, while the number of woody shrubs and climbers is not far short of that total. Of all Indian species of timber teak stands first, both in quality and as to the amount annually exported from the State forests. Sal comes next in importance and is obtained in the greatest quantities from the United Provinces and Nepal, while a very considerable amount is also available from Bengal, the Central Provinces, Assam and the Feudatory States of Orissa. Of other species of nearly equal importance is deodar, the timber of which is extensively used in construction and as railway sleepers; sandalwood, sissoo and blackwood, the last two timbers being highly prized for building purposes and furniture making; the sundri-wood of the Sundarbans and Basseln, used in boat and carriage building; Andaman and Burman Padauk, used for the construction of gun carriages, furniture and railway carriages; the Pyinkado of Burma, used in building and one of the first sleeper woods in the world; the Red Sanders of Madras, babul, the iron eng wood of Burma, all used for building and for a variety of other purposes and Khair from which "Cutch" is obtained. A great variety of other useful timbers could be mentioned of nearly equal importance to the above, which go to supply the requirements of the enormous population of the Indian Empire.

#### Minor Forest Products.

Turning now to Minor Forest Products, the most important come under the main heads, fibres, and flosses, grasses, distillation products, oil seeds, tan and dyes, gums and resins, rubber, drugs and spices, edible products, bamboos, canes, and animal and miscellaneous products. The number is very large, while some of them are of considerable economic importance, so much so that they realized over 107 lakhs of rupees in 1913-14. It is not possible to do more than to mention one or two of the most important of these commodities, as for instance myrabolams for tanning. Cutch is of even greater importance, being produced chiefly in Burma and the United Provinces though also prepared on a more limited scale elsewhere. Another equally well known product is lac, produced chiefly in Sind and the Central Provinces which besides being used locally, is annually exported in the form of shellac. Of other Minor Forest Products which deserve mention are rosha and lemon oils; gum kino, babul gum, gurjan oil, thitsal damar and rubber, which are classed as exuded products; sabal grass for papermaking and munj grass for fibre and thatching; mohwa seed yielding a valuable oil, sandal and agar wood oil and the essential oils obtained from them; simul floss used for stuffing pillows; kamella powder and lac dye used for dyeing; podophyllum resin, cassia bark, cardamoms, pepper and strychnine, come under the head of drugs and spices; and a variety of other products often of considerable local values.

From what has been said above it will be seen that the Minor Products obtained from the Indian forests play by no means a small part in the economy and commerce of the country.



AREA OF FOREST LANDS. OUTTURN OF PRODUCE, and REVENUE and EXPENDITURE of FOREST DEPARTMENT

Province.	Area of Province	Forest Area.				Proportion of Forests to whole Area of Province	Outturn of Produce.		Revenue.		Expenditure.	Surplus.
		Reserved Forests.	Protected Forests.	Unclassified State Forests, &c.	Total.		Timber and Fuel.	Minor Produce.	£	£		
Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Per cent.	Cu. ft.	£	£	£	£	£	
Bengal	78,875	4,871	1,711	4,030	10,612	13.5	25,436,041	23,398	107,741	42,677	65,064	
United Provinces	106,773	4,121	33	39	4,193	3.9	16,129,492	59,287	247,489	126,401	121,088	
Punjab	96,650	2,165	5,203	946	8,314	8.6	22,410,841	156,474	90,330	61,279	29,050	
Burma (including Shan States)	224,854	27,332	..	114,111	141,443	62.9	69,946,089	56,927	761,695	284,993	476,702	
Bihar and Orissa	83,073	1,737	1,058	..	2,785	3.4	17,552,235	15,561	32,782	23,710	9,073	
Assam	48,915	4,381	..	18,401	22,782	46.6	14,293,135	49,655	73,198	60,683	12,515	
Central Provinces and Berar	99,876	19,684	..	..	19,684	19.7	46,584,731	148,987	212,430	130,209	82,221	
Coorg	1,582	520	..	..	520	32.9	561,045	1,692	21,948	11,801	10,047	
North-West Frontier Province	13,184	236	..	..	236	1.8	4,674,153	2,459	17,783	8,735	9,048	
Ajmer-Merwara	2,767	142	..	..	142	5.1	458,442	1,589	2,260	1,573	687	
Baluchistan	54,228	313	..	472	785	1.4	21,634,242	2,908	1,333	1,687	—354	
Andamans	3,143	35	..	2,124	2,209	70.3	1,821,555	344	29,721	18,319	11,409	
Nicobar	142,402	18,864	..	802	16,665	13.8	28,501,273	124,563	280,021	195,721	84,300	
Bombay	123,316	11,857	..	385	12,242	9.9	46,077,346	78,906	340,210	172,658	167,562	
Total, 1913-14	1,079,638	96,297	8,390	140,925	245,612	22.7	294,643,323	719,927	2,220,103	1,169,564	1,050,539	
1912-13	1,079,163	96,867	8,492	133,564	238,923	22.1	290,718,866	738,978	2,147,321	1,147,187	1,000,134	
1911-12	1,071,051	96,148	8,496	138,316	242,960	22.7	257,194,423	708,982	1,887,157	1,129,771	807,386	
1910-11	1,071,010	96,387	8,507	138,584	243,478	22.7	260,583,175	635,188	1,827,030	1,016,268	810,762	
1909-10	1,042,718	96,474	8,814	140,263	245,551	23.5	241,132,930	554,095	1,735,053	994,710	740,343	
1908-9	1,040,872	94,561	8,835	138,378	241,774	23.2	232,035,865	526,669	1,697,120	981,736	715,384	
1907-8	1,040,666	94,059	8,853	134,897	237,809	23.8	234,982,123	551,144	1,724,198	967,528	756,670	
1906-7	1,042,477	94,037	9,468	136,623	240,138	23.0	222,146,948	504,419	1,706,099	937,587	828,513	
1905-6	1,025,345	92,486	10,018	131,157	233,651	22.8	246,334,840	461,300	1,778,306	950,568	827,738	
1904-5	1,021,983	92,182	9,435	131,324	232,941	22.8	251,568,276	387,795	1,901,997	864,524	737,473	

## RUBBER CULTIVATION.

The most important rubber-yielding tree found growing naturally in the Forests of India is *Ficus elastica*, a very large tree of the outer Himalayas from Nepal eastwards, in Assam, the Khasia Hills and Upper Burma. It has also been cultivated in Assam in the Charduar plantation in the Tezpur Sub-Division, as also in the Kuli plantation of the Gauhati Sub-Division in the Kamrup Division. There are also a number of other rubber-yielding trees found in the Indian and Burman forests from which rubber can be collected on terms quoted by Government. Attempts have been made to cultivate Para, Ceara and Castilloa in various parts of India and Burma. In India proper the chief attempts were made on the west coast, about 180 acres being planted from 1908 onward at Gersoppa. Similar attempts have been made in Madras: but at present Para rubber is being grown as a commercial product rather in Burma than the rest of India.

The production of rubber in India is confined to Assam, Burma, and the Madras Presidency:—

	Acres.	No. of trees.
Assam .. ..	4,681	137,430
Madras .. ..	12,022	1,630,476
Burma .. ..	29,544	4,911,399
Total .. ..	46,247	6,685,305

The yield of Assam plantations is relatively small, and the number of trees to the acre is much less than in Madras and Burma. The outturn of Madras in 1913 was more than

double that of Burma, where most of the trees being less than six years old are not yet productive. All planting is stump planting about 9 to 12 months old. The trees can be tapped in four years from the date of planting. The average yield in Burma from 4 to 6 years old trees is 1½ to 3 lbs. per tree per year. The capital invested is from £22 to £25 per acre. The average cost of production is about 1s. 6d. to 1s. 10d. per lb.

There has been a steady development in the exports of rubber from India. The exports increased from 23,264 cwts., valued at Rs. 79 lakhs, in 1913-14 to 32,825 cwts., valued at Rs. 93½ lakhs, in the year 1914-15 and to 47,000 cwts., valued at Rs. 126½ lakhs in 1915-16. India, including Burma and the Mergol, has increased its plantations from 46,000 acres in 1913—the year for which statistics are given above—to 65,000 acres in 1914.

The Commissioner of Settlements and Land Records, Burma, gives the following rough estimates of future production—

1915 .. ..	1,500,000 lbs.
1916 .. ..	1,800,000 "
1917 .. ..	3,000,000 "

BIBLIOGRAPHY.—For fuller details see "Dictionary of the Economic Products of India" and the abridged edition of the same published in 1908 under the title: "The Commercial products of India" by Sir George Watts; and the "Commercial Guide to the Forest Economic Products of India" by R. S. Pearson, published by the Government Press, Calcutta, 1912.

## MATCH FACTORIES.

The total imports of matches into British India in 1915-16 were over 18 million gross, valued at approximately Rs. 1.38 lakhs or £922,000. The development of the trade in recent years is of more than ordinary interest, and the figures in the following table speak for themselves.—

		Twelve months, April to March.			
		1913.	1914.	1915.	1916.
Japan .. ..	1,000 gross boxes ..	7,299	7,287	10,478	15,278
Sweden .. ..	" .. ..	4,226	8,635	2,877	2,321
Norway .. ..	" .. ..	1,419	865	649	644
Austria-Hungary .. ..	" .. ..	1,154	1,377	815	..
Belgium .. ..	" .. ..	347	307	172	33
Germany .. ..	" .. ..	351	189	96	7
Straits Settlements (chiefly of Japanese manufacture) .. ..	" .. ..	248	86	166	96
Other countries .. ..	" .. ..	81	143	162	26
Total .. ..		15,125	18,894	15,415	18,805

In normal years matches are also imported from Austria-Hungary, Germany and Belgium. In the opinion of the Forest experts at Dehra Dun there is an abundance of raw material in this country for match manufacture.

Indian timbers for matches.—In an article on the Indian match industry which appeared in the *Indian Agriculturist* the woods of the following species are said to be employed in Burma for match splints: *Bombax insigne*, *B. malabaricum* (simul), *Anthocephalus Cadamba*

(kadam), *Sarcocephalus cordatus*, *Spondias mangifera* (amra), and *Engelhardtia spicata* (palash). These woods are not the best for the purpose, but are those most easily procurable. There are other kinds of white wood, such as poplar, pine, willow, and alder, in abundant quantities, but they are difficult to extract and transport and are therefore costly.

The attempts to manufacture matches in India have not hitherto been attended with great success, but recently two well-equipped

## PAPER MAKING.

This industry before the war did not make the headway in India that had been anticipated, there being only 11 mills at work now with an authorised capital of Rs. 49½ lakhs, from which the output in 1915 was 30,361 tons valued at Rs. 90 lakhs.

In India the effects of the war were immediately felt in the rise in the price of wood-pulp, which is used in considerable quantities by mills. The high cost of imported woodpulp and the increasing price paid for raw materials such as balb grass, the cost of transporting the raw material to the mills, and the temporarily high cost of chemicals are the chief obstacles to the development of the local industry. The position may be greatly improved when the new sources of raw materials are exploited and the products made readily available. The total consumption of paper in India is at present estimated at about 80,000 tons per annum, of which over 30,000 tons are manufactured in India, and the balance (chiefly high class stationery) is imported. The war has been of great advantage to Indian paper mills as it has resulted in curtailing the competition from abroad, and Indian mills have accordingly been able, with the decreased supply for consumption, to raise their prices.

The total imports of paper, pasteboard, and stationery in 1915-16 were valued at Rs. 2,91 lakhs, an increase of 9 per cent. over the previous year. Of the imports paper accounted for Rs. 1,35 lakhs, an increase of 8 per cent., pasteboard Rs. 9 lakhs, an increase of 20 per cent. and stationery Rs. 57 lakhs, or an increase of 9 per cent.

There are five large paper mills in the country working on up-to-date Western lines, viz., at Titagarh, Kankinara and Raniganj in Bengal, the Upper India Cooper Mills at Lucknow and the Reay Mill at Poona. There are also two smaller mills at Bombay and Surat which make only country paper, and there are one or two other mills which recently were not working. The five large mills have a large Government connection, as the greater part of Government orders for paper is placed in India.

The existence of the local industry depends chiefly on the supply of Sabal grass which on account of unfavourable seasons sometimes yields short crops. It is of great importance, therefore, to look for materials affording a constant outturn, and various reports have been published on the available paper-making materials. Considerable attention has been devoted to Bamboo, since 1875 when it was found that this plant—of which there are four chief varieties in India—yields a fibrous paper

stock which made a quality of paper superior to esparto grass and at a considerably less cost. It was at that time estimated that one acre of bamboo would yield 10 tons of dried stems equivalent to 6 tons of merchantable cellulose. In 1905 Mr. R. W. Sindall was invited by Government to visit Burma with a view of enquiring into the possibility of manufacturing paper pulp. His report on the subject appeared in March 1906. He made numerous experiments with bamboo and woods of Burma and laid down lines along which further enquiry should be made. Subsequently Mr. W. Raitt, a pulp expert, was engaged at the Forest Research Institute in conducting tests on the treatment of bamboos by the soda and sulphate processes, the treatment of bamboo before boiling, with remarks on the utilisation of nodes and internodes. His results were embodied in the "Report on the investigation of Bamboo or Production of Paper-pulp," published in 1911. Mr. R. S. Pearson of the Forest Service, Dehra Dun, as the outcome of enquiries made throughout India published in 1912 a note on the Utilization of Bamboo for the manufacture of Paper-pulp. The yield per acre from bamboo is larger than that of grasses usually used for paper. The cost of working into pulp has been estimated to yield a product cheaper than imported unbleached spruce sulphite and unbleached sabal grass pulp. In 1915 Mr. Dhruva Sumanas published a pamphlet, *Dendrocalamus Strictus Bamboo of the Dangs*, as the result of investigations carried on in Bansda State.

The leading Indian paper grass for the last thirty years has been the bhabh, bhabar, or sabal grass of Northern India. It is a perennial grass plentiful in drier tracts from Chota Nagpur and Rajmahal to Nepal and Garhwal. The Calcutta mills draw their supplies from Sahibganj, Chota Nagpur and the Nepal Terai. The quantity annually exported from Sahibganj is between three to four lakhs of maunds. The cutting in these districts is said to commence in October when the plants are six or seven feet high. Sabal grass yields from 36.6 to 45.5 per cent. of bleached cellulose.

**Imported materials.**—Paper-making materials, mostly woodpulp, are imported to a great extent from the United Kingdom, Austria-Hungary, Sweden, and Germany. Of chemicals the bleaching material, caustic soda, and sulphur or sulphuric acid are imported chiefly from the United Kingdom. Rosin is already being manufactured by the Forest Department in the United Provinces, from crude resin obtained by tapping pine trees in the Himalayan forests, and the product is taken by the paper mills in India.

# Mines and Minerals.

The feature which stands out most prominently in a survey of the mineral industries of India is the fact that until recent years little has been done to develop those minerals which are essential to modern metallurgical and chemical industries, while most striking progress has been made in opening out deposits from which products are obtained suitable for export, or for consumption in the country by what may conveniently be called direct processes. In this respect India of to-day stands in contrast to the India of a century ago. The European chemist armed with cheap supplies of sulphuric acid and alkali, and aided by low sea freights and increased facilities for internal distribution by the spreading network of railways has been enabled to stamp out, in all but remote localities, the once flourishing native manufactures of alum, the various alkaline compounds, blue vitriol, copperas, copper, lead, steel and iron, and seriously to curtail the export trade in nitre and borax. The reaction against that invasion is of recent date. The high quality of the native-made iron, the early anticipation of the processes now employed in Europe for the manufacture of high-class steels, and the artistic products in copper and brass gave the country a prominent position in the ancient metallurgical world, while as a chief source of nitre India held a position of peculiar political importance until, less than forty years ago, the chemical manufacturer of Europe found among his by-products, cheaper and more effective compounds for the manufacture of explosives.

With the spread of railways, the development of manufactures connected with jute, cotton and paper, and the gradually extended use of

electricity the demand for metallurgical and chemical products in India has steadily grown. Before long the stage must be reached at which the variety and quantity of products required, but now imported, will satisfy the conditions necessary for the local production of those which can be economically manufactured only for the supply of groups of industries.

**Value of Output.**—The total value of the chief minerals for which returns of production are available for the years 1914 and 1915 was as follows:—

	1914	1915.
	£	£
Coal .. ..	3,907,380	3,781,064
Gold .. ..	2,318,355	2,369,486
Petroleum .. ..	958,565	1,256,803
Manganese-ore .. ..	877,284	929,546
Salt .. ..	483,289	660,254
Mica .. ..	287,310	183,947
Saltpetre .. ..	272,462	373,891
Lead-ore and Lead .. ..	202,320	316,182
Tungsten-ore .. ..	178,543	296,772

## Coal.

Most of the coal raised in India comes from the Bengal—Gondwana coal-fields. Outside Bengal the most important mines are those at Singareni in Hyderabad, but there are a number of smaller mines which have been worked at one time or another.

Of the eight leading industries only one, namely coal, showed a decrease in the value of its output in 1915, at the same time, although the value of the output has decreased from £3,907,380 to £3,781,064, the actual quantity produced has increased considerably and has risen from a little under 10½ million tons in the preceding year to over 17 million tons. This, of course, means that there has been a considerable fall in the price of coal, the direct cause being the scarcity of steamers and the consequent restriction of exports from Calcutta to other Indian ports

	Output. Tons.	Declared value per ton.	Exports. Tons.	Imports. Tons.
		Rs. a p.		
1904-05 .. ..	8,216,706	7 13 2	594,832	252,393
1905-06 .. ..	8,417,739	7 13 3	836,149	179,935
1906-07 .. ..	9,783,250	7 15 11	935,350	257,203
1907-08 .. ..	11,147,339	8 1 7	727,881	308,348
1908-09 .. ..	12,769,635	8 13 5	571,582	455,806
1909-10 .. ..	11,870,064	8 13 7	758,829	428,535
1910-11 .. ..	12,047,413	8 10 6	889,601	334,181
1911-12 .. ..	12,715,534	8 13 0	873,987	297,912
1912-13 .. ..	14,706,339	10 0 4	881,230	653,694
1913-14 .. ..	16,208,009	9 8 11	723,641	559,190
1914-15 .. ..	16,464,000	8 14 2	577,944	392,000
1915-16 .. ..	17,103,932	....	751,801	175,000



### Provincial production of coal during the years 1914 and 1915.

Province.	1914.	1915.
	Tons.	Tons.
Assam .. ..	305,160	311,296
Baluchistan .. ..	48,234	43,607
Bengal .. ..	4,424,557	4,975,460
Bihar and Orissa .. ..	10,661,062	10,718,155
Barma .. ..	.....	25
Central India .. ..	152,906	139,680
Central Provinces .. ..	214,745	253,118
Hyderabad .. ..	555,991	586,824
North-West Frontier Province .. ..	91	60
Punjab .. ..	51,303	57,911
Rajputana (Bikaner) .. ..	17,211	17,796
Total .. ..	16,464,263	17,103,932

The growth of the Coal Mining Industry may be roughly gauged from the following

### table showing the number of Joint-Stock Coal Companies and their total paid-up capital.

	No.	Rs.
1906-07.. ..	66	260 lakhs.
1907-08.. ..	115	432 "
1908-09.. ..	125	668 "
1909-10.. ..	128	781 "
1910-11.. ..	129	721 "
1911-12.. ..	128	722 "
1912-13.. ..	139	716 "
1913-14.. ..	143	725 "
1914-15.. ..	145	744 "

The relative proportions of the output contributed by the Jharia and the Raniganj fields respectively were slightly different in 1915 to that of recent years, the output of the Jharia field having fallen slightly in 1915, whereas that of Raniganj rose by over 1 million tons; the respective percentages of the total output of India as regards these two coalfields were Jharia, 53.44, and Raniganj, 32.07 in 1915 as against 55.55 and 30.04 per cent. in the preceding year.

**Prices.**—The considerable increase in the output in 1915 combined with the lack of sea-borne transport resulted in a considerable fall in the pit's mouth value in the chief producing areas, the price falling in the Bengal fields from Rs. 3-18-10 per ton in 1914 to Rs. 3-6-2 in 1915, and in Bihar and Orissa from Rs. 3-3-4 to Rs. 2-15-6.

## IRON ORE.

Bengal and Bihar and Orissa are the only provinces in India in which iron ore is mined for smelting by European methods. Iron smelting, however, was at one time a widespread industry in India and there is hardly a district away from the great alluvial tracts of the Indus, Ganges and Brahmaputra in which slag heaps are not found. The primitive iron smelter finds no difficulty in obtaining sufficient supplies of ore from deposits that no European ironmaster would regard as worth his serious consideration. Early attempts to introduce European processes for the manufacture of pig-iron and steel were recorded in 1830 in the South Arcot District. Since that date various other attempts have been made but none proved a success before that now in operation near Barakar in Bengal. The site of the **Barakar Iron-Works** was originally chosen on account of the proximity of both coal and ore supplies. The outcrop of iron stone shales between the coal-bearing Barakar and Raniganj stages stretches east and west from the works, and for many years the clay ironstone nodules obtainable from this formation formed the only supply of ore used in the blast furnaces. Recently magnetite and hematite have been obtained from the Manbhum and Singhbhum districts, and the production from the last named district has largely replaced the supplies of ore hitherto obtained near the iron-works. The Bengal Iron and Steel Company, Limited, have now given up the use of ores obtained from the neighbourhood of Barakar and Raniganj and are now obtaining their ores exclusively from the Kolhan Estate, Singhbhum. The deposits are known as Pansira Hill

and Buda Hill situated about 12 miles and 8 miles south-east of Manbhum Station, Bengal-Nagpur Railway. The total quantity of ore in these two deposits has been estimated to be about 10 millions tons. The **Tata Iron and Steel Company** at Sakul possesses slightly richer and purer ore-bodies in the Rajpur district, supplies of ore are at present drawn from the deposits in Mayurbhanj. The ore-deposits have all been found to take the form of roughly lenticular leads or bodies of hematite, with small proportions of magnetite, in close association with granite on the one hand and granitic rocks on the other. These latter have been noted in the field as charnockites, the term being employed, rather loosely no doubt, but probably in the main correctly, to cover types of pretty widely varying acidity. In still more intimate association with the ores than either of the foregoing were found masses of dense quartz rocks, frequently banded, and banded quartz-iron-ore rocks. These last are of the types so commonly associated with Indian iron-ores, but are here not so prominent as is usually the case.

There was a considerable decline in 1915 in the output of iron-ore which fell from a little under 442,000 tons in 1914 to about 390,000 in 1915. The amount of pig-iron produced during the year by the Tata Iron and Steel Company, Limited, was 154,509 tons and by the Bengal Iron and Steel Company, Limited, 87,285 tons. The former company produced also 76,355 tons of steel including 16,817 tons of steel rails, whilst the latter company produced 25,634 tons of cast iron castings.

## MANGANESE ORE.

This industry commenced some twenty years ago by quarrying the deposits of the Vizagapatam district, and from an output of 674 tons in 1892, the production rose rapidly to 92,008 tons in 1900 when the richer deposits in the Central Provinces were also attacked, and are now yielding a larger quantity of ore than the Vizagapatam mines. India now alternates with Russia as the first manganese-producing country in the world. The most important deposits occur in the Central Provinces, Madras, Central India, and Mysore—the largest supply coming from the Central Provinces. The uses to which the ore is put are somewhat varied. The peroxide is used by glass manufacturers to destroy the green colour in glass making, and it is also used in porcelain painting and glazing for the brown colour which it yields. The ore is now used in the manufacture of ferromanganese for use in steel manufacture. Since 1904, when the total output was 150,190 tons, the progress of the industry has been remarkable owing to the high prices prevailing. In 1905 production reached 247,427 tons; the following year it was more than doubled (571,405 tons), and in 1907 the figures again rose to 902,291 tons. In 1909, on account of the fall in prices the output contracted to 642,675 tons, but it almost regained its former position in 1910 when the production rose to 800,907 tons. In 1911 it fell to 670,290 tons. In 1915 the output was 450,416 tons valued at £929,546. The ore raised in the Central Provinces is of a very high grade, ranging from 50 to 54 per cent. of the metal, and in consequence of its high quality is able to pay the heavy tax of freight over 500 miles of railway, besides the shipment charges to

Europe and America, for the whole of the ore is exported to be used principally in steel manufacture in the United Kingdom, Germany and the United States.

Manganese was one of the minerals which were largely affected by the war, the exports being restricted almost entirely to consignments to the United Kingdom, with a comparatively small quantity to the United States; the quantity exported fell from about 538,000 tons in 1914 to less than 420,000 tons in 1915. The latter figure again is only a little more than half the quantity exported in the year 1913. This naturally resulted in a considerable decrease in the production of ore which fell from a little under 683,000 tons in 1914 to a little over 450,000 tons, a decrease of 34 per cent. It is impossible to estimate accurately the value of this output since the price of the ore at the present time is purely artificial and depends to a great extent on the cost of freight; at the prices which have prevailed during the year, the value, based on the usual methods of calculations, would amount to £929,546, which, however, is not the true value of the material extracted, but is deduced from the value of only so much of the output as was actually exported during the year. If the conditions which prevailed during the year 1915 were to continue for a considerable period, the above figures would no doubt fairly represent the true value of the output, but if the stringency in the matter of markets and of freights were to be relieved, the value of the material produced, but not yet exported, would naturally be considerably reduced. There are no means therefore of estimating more accurately the value of the year's output.

## GOLD.

The greater part of the total output of gold in India is derived from the Kolar gold field in Mysore. During the last decade the production of this mine reached its highest point in 1905 when 616,758 ounces were raised. In 1906 the quantity won was 565,208 ounces and this figure fell to 535,085 ounces in 1907. The figures for the latter years reveal a small improvement. The Nizam's mine at Hutti in Hyderabad comes next, but at a respectable distance, to the Kolar gold field. This mine was opened in 1903. The only other mines from which gold was raised were those in the Dharwar district of Bombay and the Anantapur district of Madras. The Dharwar mines gave an output of 2,993 ounces in 1911 but work there ceased in 1912. The Anantapur mines gave their first output of gold during the year 1910, the amount being 2,532 ounces, valued at Rs. 1,51,800. Gold mining was carried on in the North Arcot district of Madras from 1893 till 1900, the highest yield (2,654 ounces) being obtained in the year 1898. The Kyaukpazat mine in Upper Burma was worked until 1903, when the pay chute was lost and the mine closed

down. In 1902 dredging operations were started on the Irrawaddy river near Myitkyina, and 216 ounces of gold were obtained in 1904; the amount steadily increased from year to year and reached 8,445 ounces in 1909, but fell to 5,972 ounces in 1910 increasing again to 6,390 ounces in 1911 and being in 1913, only 5,393 ounces. The gold craze, which was prevalent in Rangoon a few years ago, has disappeared as suddenly as it sprang up. The Burma Gold Dredging Company holds a right to dredge for gold in the bed of the Irrawaddy river and notwithstanding the obstacles encountered from time to time in the shape of floods, etc., the company has so far been fairly successful in its operations. The small quantity of gold produced in the Punjab, the Central Provinces, and the United Provinces is obtained by washing. Gold washing is carried on in a great many districts in India, but there is no complete record of the amount obtained in this way. The average earnings of the workers are very small, and the gold thus won is used locally for making jewellery.

## Quantity and Value of Gold produced in India during 1914 and 1915.

	1914.		1915.	
	Quantity.	Value.	Quantity.	Value.
<i>Bihar and Orissa—</i>	Ozs.	£	Ozs.	£
Singbhum .. .. .	....	....	450	1,800
<i>Burma—</i>				
Myitkyina .. .. .	3,635.60	13,905	3,106.83	11,913
Katha .. .. .	12.69	67	10.99	91
Upper Chindwin .. .. .	45.60	268	50.25	295
Shwabo .. .. .	10.55	55	7.31	36
Salween .. .. .	....	....	1.20	5
<i>Hyderabad .. .. .</i>	21,200	80,479	17,809.7	68,338
<i>Madras .. .. .</i>	19,873	82,959	23,870	101,324
<i>Mysore .. .. .</i>	502,355	2,159,004	571,199	2,185,409
<i>Punjab .. .. .</i>	249.98	994	149.59	604
<i>United Provinces .. .. .</i>	5.75	24	7.37	31
Total .. .. .	607,388.07	2,338,355	616,728.24	2,369,846

## PETROLEUM.

Petroleum is found in India in two distinct areas—one on the east, which includes Assam, Burma, and the islands off the Arakan coast. This belt extends to the productive oil fields of Sumatra, Java, and Borneo. The other area is on the west, and includes the Punjab and Baluchistan the same belt of oil-bearing rocks being continued beyond the borders of British India to Persia. Of these two the eastern area is by far the most important, and the most successful oil fields are found in the Irrawaddy valley. Yenangyat is the oldest and most developed of these fields. Native wells have been at work here for over 100 years, and in 1886, prior to the annexation of Upper Burma, the output is estimated to have averaged over 2 million gallons a year. Drilling was begun in 1887. The Yenangyat field yielded a very small supply of petroleum before 1891, in which year drilling was started by the Burma Oil Company. Singu now holds the second place among the oil fields of India. Petroleum was struck at the end of 1901, and in 1903, 5 million gallons were obtained. In 1907 and 1908 the production of this field was 43 million

gallons, and after a fall to 31½ million gallons in 1910 it rose to 56½ million gallons in 1912. Several of the islands off the Arakan coasts are known to contain oil deposits, but their value, is uncertain. About 20,000 gallons were obtained from the eastern Barongo Island near Akyab, and about 37,000 gallons from Ramri Island in the Kyaukpyu district during 1911. Oil was struck at Minbu in 1910, the production for that year being 18,320 gallons which increased to nearly 4 million gallons in 1912. The existence of oil in Assam has been known for many years and an oil spring was struck near Makum in 1867. Nothing more however, was done until 1883, and from that year up till 1902 progress was slow. Since that year the annual production has been between 2½ and 4 million gallons.

On the west, oil springs have been known for many years to exist in the Rawalpindi and other districts in the Punjab. In Baluchistan geological conditions are adverse, and though some small oil springs have been discovered, attempts to develop them have not hitherto been successful.

## Quantity and value of Petroleum produced in India during 1914 and 1915 :—

	1914.		1915.	
	Quantity.	Value.	Quantity.	Value.
<i>Burma—</i>	Gallons.	£	Gallons.	£
Akyab .. .. .	12,948	249	12,045	231
Kyaukpyu .. .. .	25,987	777	21,220	716
Nagwe (Yenangyat)	174,981,790	673,525	198,809,315	765,240
Myingyan (Singu) .. .. .	73,409,518	244,698	77,005,880	448,307
Pakokku (Yenangyat) .. .. .	4,516,685	10,729	4,099,345	15,525
Minbu .. .. .	1,083,190	7,013	2,310,207	9,651
Thayetmyo .. .. .	22,836	95	25,920	108
<i>Assam—</i>				
Digboi (Lakhimpur) .. .. .	4,088,547	15,466	4,556,150	15,609
<i>Punjab—</i>				
Attock .. .. .	....	....	250,000	2,000
Mianwali .. .. .	1,200	13	1,494	16
Total .. .. .	259,342,710	958,565	287,093,576	1,256,893

**Imports of kerosene** during 1915 were considerably less than in the preceding year, the total quantity imported falling from nearly 84 million gallons to a little over 68 million gallons. The greater part of the decrease was in the imports from Borneo, but imports from Persia fell by nearly 2 million gallons, and from the United States by about 3½ million gallons. There was a small rise in the quantity of paraffin wax exported.

**Amber, Graphite and Mica.**—Amber is found in very small quantities in Burma, the output for 1915 being 13 cwts. valued at £199. Graphite is found in small quantities in various places but little progress has been made in mining except in Travancore. India has for many years been the leading producer of mica, turning out more than half of the world's supply. In 1914, owing to the war, the output was only 38,189 cwts. compared with 43,650 cwts. in 1913 and this figure fell still lower in 1915. A large proportion of the demand for this mineral has come from Germany, for use in its large electrical industries.

**Tin, Copper, Silver, Lead and Antimony.**—The only persistent attempt to mine tin is in Burma. The output was for sometime insignificant but rose in 1913 to 116 tons valued at £46,000 which fell to £38,000 in 1914. But in 1915 the value of the output rose to £54,980. Copper is found in Southern India in Rajputana, and at various places along the outer Himalayas, but the ore is smelted for the metal alone, no attempt being made to utilize the by-products. An attempt is being made to work lodes near Pangyang, in the Northern Shan States, for the production of silver and lead, and in Southern Burma for antimony.

**Gem Stones.**—The only precious and semi-precious stones at present mined in India are the diamond, ruby, sapphire, spinel, tourmaline, garnet, rock-crystal, agate, cornelian, jadeite and amber. Amber has already been referred to; of the rest only the ruby, sapphire and jadeite attain any considerable value in production and the export of the latter has declined owing to the disturbances in China, which is the chief purchaser of Burmese jadeite. The output of diamonds is comparatively unimportant. The ruby-mining industry of Burma has lately undergone a favourable change. In 1915 the output of gems was 251,000 carats.

**Wolfram.**—A marked feature of the development of the mineral industries of India during recent years is the rapid rise of the wolfram industry in the districts of Mergui and Tavoy in Lower Burma. Although there was an output of 7 tons from Mergui in 1909, the industry dates practically from the following year, 1910. The output of wolfram in Burma rose from 1,688 tons valued at £127,762 in 1913 to 2,326 tons valued at £178,543 in 1914-15. The industry, however, subsequently recovered itself, and, owing to the demand for wolfram for the manufacture of tungsten-steel, special regulations have been made for the mining of it under the Defence of India Act.

According to the Director of the Geological Survey, the total production of the world is about 8,000 tons per annum of concentrates carrying from 60 to 70 per cent. of tungstic trioxide. Of this Burma produces one quarter. In Siam the mining of wolfram is a recent development. Wolfram is also produced in Australia and in the Malay Peninsula. Formerly, Germany used to take over 50 per cent. of the total exports from India, but this is one of the minerals of which the export was restricted owing to the war.

Quantity and Value of Tungsten-ore produced in Burma during 1914 and 1915.

	1914.		1915.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£
Burma—				
Mergui .. .. .	194	16,647	232.3	29,554
Southern Shan States .. .	138.4	8,993	330.7	24,802
Tavoy .. .. .	1,976.6	152,333	2,032.9	235,827
Thahton .. .. .	17	570	49.4	6,589
Total .. .	2,326	178,543	2,645.3	296,772

**Radio-active Minerals.**—The General Report of the Director of the Geological Survey of India for 1913 includes a brief report by E. C. Burton on an occurrence of pitchblende at mica mines near Singar, Gaya district, Bengal. The pitchblende occurs as rounded nodules in a pegmatite that is intrusive in

mica schists. Other minerals occurring in the pegmatite are mica, tripelite, ilmenite, tourmaline, and uranium ochre; whitish columbite, zircon, and torbernite have also been recorded. Of these minerals tripelite is stated to be the commonest.

The importance of the find of uranium oxide impregnating the tripelite led to the discovery of weathered pitchblende, and as the pits were deepened the weathering became less and less until pure pitchblende was obtained. In the six months from July 1913 to February 1914, eight hundredweight of pitchblende was obtained from Abrakhi Hill together with six tons of uranium earth debris, five to six hundred tons of tripelite and two tons of tantalite. These ores were raised under a prospecting license in respect of Abrakhi Hill alone and in March 1914, a mining lease for thirty years was obtained in respect of sixty square miles of the Singar estate. The first intention was to work only the five square miles round Abrakhi and a syndicate was formed for this purpose, which on the outbreak of war, was refused a Trading License on account of the German element in it.

**Zinc.**—In the years 1913 and 1914 considerable amounts of zinc concentrates were shipped to Belgium and Germany for reduction; in 1915 only 196 tons were exported as against over 8,000 tons in the preceding year. The question of the ultimate treatment of the Bawdwin concentrates is an important one for India, since, should it be found feasible to erect zinc smelters in this country, the resultant production of large quantities of cheap sulphuric acid should have a far-reaching effect on industrial development.

### Inspection of Mines.

During the year 1915 the average number of persons working in and about the mines regulated by the Indian Mines Act was 180,088, of whom 118,017 worked underground and 62,071 on the surface. One hundred and twelve thousand, seven hundred and eighty-seven were adult males, 62,096 were adult females and 5,205 were children under 12 years of age. This is a decrease of 5,123 workers or 2.77 per cent.

**Accidents.**—During the year 1915, at mines regulated by the Indian Mines Act, 1901, there were 163 fatal accidents, being an increase

of 11 on the number in 1914, and an increase of 28 on the average number in the previous 5 years. The increase is chiefly made up of accidents from falls of roof and accidents on the surface, of the latter of which there were 37 as compared with 17 in 1914. There were increases in all the four sub-heads into which surface accidents are classified.

These accidents involved the loss of 188 lives. This is a decrease of 3, as compared with the number of deaths in 1914. With the exception of one accident, which was due to a sudden collapse of the workings, and caused death to ten persons sleeping in their huts on the surface, there was no accident causing loss of life on a large scale. In one case three persons and in fourteen cases two persons were killed.

Of these 163 accidents the Chief Inspector of Mines regards (a) 78 as being due to misadventure, (b) 59 to the fault of the deceased, (c) 8 to the fault of fellow workmen, (d) 7 to the fault of subordinate officials and (e) 16 to the fault of the management.

The death-rate per thousand persons employed was 1.04, while that of the preceding five years was 1.15. At coal mines only these figures were 1.14 and 1.32 and at mines other than coal 0.64 and 0.70. At coal mines in England during the ten years ending with and including 1914, the death-rate per thousand persons employed varied from 1.08 (lowest) to 1.69 (highest). The death-rate per million tons raised at coal mines only was 10.15 while that of the preceding five years was 11.57. At coal mines in England during the ten years ending with and including 1914, the death-rate per million tons raised varied from 4.31 (lowest) to 6.37 (highest).

*Chief Inspector of Mines in India, G. F. Adams, M. Inst., C. E.*

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## Industrial Arts.

"The Arts of India," wrote Sir George Birdwood in the first lines of his book on the industrial arts of India which has now become a classic, "are the illustration of the religious life of the Hindus, as that life was already organised in full perfection under the code of Manu, B. C. 900-300." Whether that statement be accepted in its entirety or not, some knowledge of the religion of the Hindus is most essential to an understanding of their arts. That subject is dealt with elsewhere in this book and so is the subject of caste, of which a knowledge is equally important in this connexion. But, by way of preface to a brief outline of some of the more important art industries of the country, it may be well to state what is the basis of practically the whole industrial system of India. The child learns his hereditary craft from his father or is apprenticed to a *mistri*, or master-craftsman, who is often a relative of the pupil. There is no regular fee, but a small present is often paid to the owner or foreman of the shop, and in some trades a religious ceremony may take place at the time of apprenticeship. The child begins his work at a very early age; at first he is expected to undertake the menial duties of the shop and is put to cleaning the tools; later he begins to perform the simplest operations of the trade. There is little definite instruction, but the boy gradually acquires skill by handling the tools and watching the workmen at their task. As soon as he has made a little progress, the apprentice is granted a small wage which is gradually increased as he becomes more useful; and when his training is finished, he either goes out into the world or secures a place on the permanent roll of his master's shop. To the poor artisan the arrangement has this great advantage, that at a very early age the child earns his livelihood and ceases to be a burden on his parents. In former days the system answered well enough for the rude village industries which satisfied the needs of the bulk of the population, and it also succeeded in maintaining a class of workmen who dealt in metals and textile fabrics with such sense of form and colour that their work has challenged comparison with the most artistic products of the West. It has not, however, enabled the Indian artisans to keep abreast with modern industrial development. Imported articles have to a considerable extent supplanted the products of home industry, the quality of Indian work has in many cases deteriorated, and the workman has neither taken due advantage of the wide openings afforded to him by advancing civilisation and trade, nor adhered rigidly to old methods and traditions. The efforts made to assist him have not as yet been attended with a great measure of success, but the potentialities of the Schools of Art and Technical Institutions are only beginning to be appreciated.

### Wood-carving.

Indian wood-work, which must come first in importance in the art products of the country, shows great diversity, and many points of interest, and the wood-carvers of the country, have gained a well-deserved reputation out-

side India. The more noteworthy crafts include carving as applied to architecture, furniture, and cabinet work inlaying with other woods or metals, veneering, and lattice-work. The art and industrial schools of Calcutta, Madras, Bombay and Lahore have given much attention to developing these crafts on indigenous lines, with the result that degeneration has to a large extent been prevented and a superior class of carpenters, dispersed over the country. On a smaller scale, objects are carved in sandal-wood with a minuteness and intricacy of elaboration only equalled by the results attained in ivory. As to style, there is a great variety of types throughout the country, the two chief influences on the art conception being religion and the nature of the wood used. Mahomedan and Sikh work—for example, is largely constructed on a geometric basis, though in the modern Sikh work—as in the Hindu—grotesque animal forms or mythological subjects are freely introduced. The woods chiefly used for ornamental work are teak, *shisham*, deodar, sandal-wood, ebony, walnut, *tun*, *nim*, Madras red-wood (sometimes called black-wood), *dudhi* (white-wood), red cedar, *sal*, *babul*, and others of less importance. Deep under-cutting and sculpture are possible with teak, red-wood, and walnut; whereas *shisham* and deodar can be used only for low relief work. In recent years a great demand for cheap and inferior carving—on tables and other articles alien to the Indian mind—has sprung up in Europe and America and has been met by the export of vast quantities of poor work, for which the soft woods only are used while bone takes the place of ivory in inlaying. "In these abominations," writes Sir George Watt in the catalogue of the 1903 Exhibition at Delhi, "it is thought sufficient proof of an Indian character to introduce some portion of a mosque or temple, and that being done all attention to such details as suitability of design or nature of ornamentation can be disregarded."

### Metal Work.

The purely indigenous or village metal manufactures are perhaps, after those connected with wood, the most important of all the art industries of India. Most of the household utensils are made of metal, which thus to a large extent take the place of the porcelain and glass of Europe. Brass is most frequently employed by Hindus and copper by Mahomedans, the copper vessels being generally tinned for safety. Every large village has its copper and ironsmiths and also its jeweller, and in some instances these local industries attain considerable magnitude, as is the case with the manufacture of copper and brass vessels at Srinagar, Benares and other towns. The making of ornamental bowls, vases, trays, and other European articles constitutes an important industry in many places, and a variety of processes is of course employed such as enamelling, damascening, and colouring either with lac or paint. The provinces of India have each two or three centres noted for their copper or brassware, and there are as many different art conceptions as centres. Some of the styles are well known all over the world, such as the Benares

style of punched brass, which is as a rule bad in design and execution, and the engraved or repoussé work in polished brass that comes in large quantities from Jaipur. Better than either of these are the perforated and repoussé copper work of Lucknow, the best products of Bombay, Poona, and some of the southern India centres, and the gongs and idols made in Burma. Ordinary domestic utensils, which are free from ornamentation so that they can be readily scoured, and the more elaborate implements used for religious ceremonials are among the most and beautiful interesting metal wares in India; but they vary in style and finish throughout the country. Sir George Watt writes:—

"The copper or brass vessel of most general use by the Hindus is the *lota*, a globular melon-shaped vessel flattened from the top and having an elegantly reflexed rim by which it is carried suspended between the fingers and thumb. In shape this doubtless originated from the partially expanded flowers of the sacred lotus, its name thus coming from the same root as the Latin *lotus*, "washed," and the English lotion "a wash". With the Mahomedans the *lota* (or *tonti*) has been given a spout because the Quran ordains that a man shall perform his ablutions in running water, hence the water when poured out of the *tonti* is considered to be running water. It is carried by holding the rim at one side and it thus dangles instead of being (as with the Hindus) suspended from the middle of the hand. The shapes of the *lota* and *tonti* and their respective uses have given birth to two widely different forms of both domestic and decorative metal work characteristic of India. For example, the spout and the use of copper, more especially when tinned, has originated a whole range of forms and designs not only quite unknown to the Hindus but next to impossible with the materials permitted by their religion." It is scarcely possible any longer to divide the gold and silver plate work of India into four or five well defined classes distinguished by the style of ornamentation, as the workers in these metals have been quick to adopt a variety of European models. In Madras mythological medallions, in imitation of the enrusted style of Southern India art, still form the characteristic feature of much of the silver work. In Bombay two distinctive forms survive, the Poona and Kutch: of these the former is a deep form of repoussé, the silver usually being oxidised, the latter has a floral design of European origin in shallow repoussé. Rangoon work is generally known by the frosted surface of the silver and Mouline work by the silver being either polished or burnished. But in almost every case the design of one province is copied in another, and the best forms of ornamentation, such as the shawl pattern of Kashmir, have fallen into disuse either because of the labour involved in their production or because the smiths have found by experience that it is just as easy to sell inferior work.

Great varieties of form and style are to be seen in the arms and jewellery made in India. Sir George Birdwood in his "Industrial arts of India," says that "the forms of Indian jewellery as well as of gold and silver plate, and the chasings and embossments decorating

them, have come down in an unbroken tradition from the Ramayana and Mahabharata." The old types survive side by side with the copies of articles imported from the Rue de la Paix, and in any Indian jeweller's shop a bewildering mixture of the archaic and the modern is to be seen.

### Shawl and Carpet Weaving.

It is only in Northern India (more especially in Kashmir) that the spinning and weaving of wool extends to the production of highly-finished and artistic goods. Scattered here and there all over the country are hand-loom factories where coarse blankets, carpets, and other fabrics are produced. This indigenous wool industry is most important in the Punjab. The great centre of shawl production is Kashmir; the industry has also been carried on for many years in parts of the Punjab, where it was introduced by colonics of Kashmir weavers. France was for many years the chief foreign market for Kashmir shawls, and the trade, which was damaged also by the competition of cheap imitations produced at Paisley, never recovered from the effects of the Franco-German War. The bulk of the Kashmir shawl-weavers became carpet-weavers or agriculturists. The latest report from the Punjab regards the case of the genuine shawl industry as "almost hopeless." Carpet-weaving is carried on in various parts of the country. It is one of the many industries which is said to have been ruined by modern civilisation, and in so far as many carpet factories in India are turning out an inferior article, according to designs furnished by dealers in Europe, this is correct. But it is wrong to ascribe the cheapening of the caste weaver's product and his increased output to under-selling by those jails in which the weaving of carpets has been introduced as an occupation for prisoners. On the other hand the jails, and especially that at Yerrowda, near Poona, have set a high standard by conserving old designs, by using good material, and by avoiding the use of aniline dyes. Since the London Exhibition of 1851 a considerable export trade in Indian pile carpets has been created. Amritsar, which caters for the American market in particular, is the most important carpet-weaving centre in India, but there are factories in many other places in Northern India, Rajputana, Central India and the United Provinces. In the lower provinces the industry hardly exists. Cotton and woollen carpets in other than pile stitch are made all over India. They are known as *dari* (a rug) and *shatranji* (a carpet) and are made in great variety. The poorer classes of Mahomedans generally use the cotton manufactures as praying carpets.

Apart from woven mats or carpets there is manufactured a great variety of so-called mats made from grass and other materials such as aloe, bamboo, coir, date and other palm leaves. Mats or rather screens (*tatties*) made of the sweetly scented *Khas-khas* are hung in front of doors; etc., to afford shade and to cool, by evaporation, the air which passes through the moistened texture. Bamboo mats are manufactured here and there all over India, and in Bengal more especially *darma* mats (those constructed of reeds) are all but

universally used in house-construction. The traffic in *darma* mats must, therefore, be very great, and give employment to a far larger number of persons than can be learned from published statistics. In some of the jails aloe-fibre mats are produced and find a fair market, while cane mats are not uncommon. These are formed by selected canes being placed parallel to each other and bound in position by cross-ties. They are exceptionally strong, and especially valued in public offices where there is much traffic.

### Embroidery.

This is one of the most important of the art industries of India attaining its highest development in Northern India. The stitches employed in the various kinds of work are numerous, but all have this in common that they are formed by the needle being pulled away from and not drawn towards the worker. Mrs. F. A. Steel has written a description of the Punjab darn stitch, known as *pulkhari*, but most of the varieties still await their historian. Darn stitch is chiefly used on coarse cotton and chain stitch on silk or woollen fabrics, the former covering the textile the latter ornamenting parts of it. European demands have led to the production of large quantities of silk embroidery, in which coloured silks and gold and silver wire are employed, for curtains, table cloths and so on. Another common form of embroidery is what is called *chikan* work on some white washing material such as calico or muslin: in this the most usual form of stitch is the satin stitch combined with a form of button holing. The manufacture of lace and knitting have been introduced into India by missionaries. "Laid" embroidery with gold and silver wire (called *karchob* work because it is done on a frame) is common throughout the country in different forms. The wires are drawn in a number of centres, particularly in Lahore, Delhi, Agra, and Benares: the details of wire drawing and the form of stitch, together with the combination with precious

stones and silk, make a great number of combinations of this work possible. A rough division between the two forms is that the massive kind is called *zardozi* and the light and graceful *kamdani*.

### Ivory.

The carving and inlaying of ivory are still, though perhaps in diminished importance, arts much practised in India. The best material used is African ivory, which is whiter and of closer grain than the Indian, but Sir George Watt has pointed out that the "fish tooth" ivory, or Mammoth ivory of Siberia, is also used by Indian workers. The centres of the craft are Delhi, Murshidabad in Bengal, Mysore, Travancore, and Moulemein. A curious fact about this industry is that, though carving is generally an hereditary occupation, there is no special caste identified with the craft like that of the silver smiths, and this is held to show that the industry as it now exists is of comparatively modern origin. Its development in recent times is due to the desire of sightseers in India to have "something Indian" to take away with them in an easily portable form. But some of the best work is still of great beauty and fine workmanship. The carving of horns and shells may possibly be counted as variations of this art.

### Statuary.

Part of that division of handicrafts which is vaguely connoted under the term "fine arts" is the subject of an article elsewhere in this book. Apart from painting, it is not a very considerable division. Statuary, except the wide-spread production of statuettes (in stone, wood, or cast metal) of mythological subjects, is little practised. Various brass workers are expert in reproducing in miniature scenes of Indian life and animals of the country, and at Lucknow some realistic terra cotta statuettes are produced. Wherever wood-carving is practised, and particularly in Burma, statuary in that material is turned out and is used chiefly for decorative purposes.



## Fisheries.

The fisheries in Indian waters are unorganised in the modern sense of the term. Vast numbers of the coastal population are through natural circumstances engaged in fishing, but a great proportion of cases this means of livelihood shares their time with agriculture. The Bengal Government took the important step, a few years ago, in connection with deep-sea fishing, of introducing a steam trawler. The undertaking served the purpose of investigation if we have yet to see commercial development on a large scale. Special measures have also been taken by the Mahratta Government with more or less success, there being in this province a Fishery Department of Government under an Honorary Director. The inland fisheries where there are large rivers or tanks are often important in many parts of India.

### Bengal & Bihar & Orissa.

The importance of the Bengal and Bihar and Orissa Fisheries—which are considered together, as they belong to the same geographical region—may be gauged from the fact that rice and fish are the principal foodstuffs of the population and that not less than 80 per cent. of the entire people consume fish as a regular article of diet. As a result, 1·6 per cent. of the population is engaged in catching, curing, and selling fish, a percentage which rises to 16 in the Presidency, Rajshahi and Dacca divisions; moreover, large numbers of cultivators are returned as fishermen also. The waters of the Bay, the rivers, and swamps all contain fish, and every ditch and puddle furnishes small fry to eke out the frugal diet of the people. The best salt-water fish are the bekti, tapal, or mango-fish, mullet, pomfret, and sole. Inland the hilsa (*Clupea hilsa*) is found in shoals in the Ganges—it migrates up the rivers, from the sea, to spawn, exactly like the English Salmon; while the rohu (*Labeo rohita*) and the katal (*Catla buehanani*) abound everywhere, as do also innumerable other varieties much esteemed by the Bengalis; shrimps and crabs are caught in myriads. The mahseer is found in the higher reaches of the rivers which debouch from the Himalayas, and (according to some reports) in some of the rivers of the Chota Nagpur plateau.

The Bengali is a clever fisherman and the Orissas and others fish along the foreshore of the Bay of Bengal, drying their catches ashore on stakes driven into some sandy beach. The larger rivers are usually fished by means of enormous nets. The tanks and ditches are periodically dragged, the fish at other times being angled or caught in a cast-net. Every streamlet is studded with hundreds of wicker fish-raps, while prawn cages are ubiquitous. The wonder is that any living fish escapes, so persistent and remorseless is the hunt for the tiny tribe. Every other interest is subordinated to its pursuit, and not only is navigation impeded, but the drainage of the country is blocked by the obstruction of every channel and outlet.

Government probably do not own more than 10 per cent. of the entire fishery rights, which have generally been alienated to private persons, having been included in the "assets" on which

the permanent settlement of estates was based, but in some cases the fishery itself is a separate "estate." In tanks the right of fishing vests in the owner or occupant who may be some public body or a private individual. In the Bay and in some portions of the Sunderbans fishing is free to all. The importance of the fishing industry has led to its occupying the special attention of Government and its officers since the earliest times of the British connection with Bengal.

Altogether 644,000 persons in Bengal subsist by fishing, or double the number subsisting by pasture. Nor is this to be wondered at, considering the nature of the country and the resources, even though imperfectly developed of its rivers, its estuaries and the sea board. In addition, moreover, to those actively engaged in fishing, there are 324,000 maintained by the sale of fish, so that the total number supported by catching and selling fish is very little under 1 million, or 2 per cent. of the total population. Fishing is in Bengal not considered an honourable reputation, and the ambition of fishing castes is to attain greater respectability by becoming cultivators. As it is, one in every twelve of those whose principal occupation is fishing also cultivates some land in Bengal, and one in six in Bihar and Orissa.

One of the first to turn his attention to scientific study of the fisheries of the Bengal region was Russell, who came out to India (Vizagapatam) in 1781 and acted as Botanist in the Carnatic to the East India Company. A succession of investigators have continued his work and their reports showed that the fisheries offered great scope for profitable development. In particular may be mentioned the great additions to the knowledge of the deep-sea fishes in the Bay of Bengal made by Colonel Alcock, F.R.S., Surgeon Naturalist to the Indian Marine Survey and, later, Superintendent of the Indian Museum in Calcutta. After extensive inquiries, he wrote that "the sea fisheries of the Bay of Bengal are of a value well nigh incalculable. That they are unknown, unearned for and unappreciated is unfortunately true; but it is equally true that they will prove a mine of wealth to whoever may have the enterprise to exploit them, and the tenacity of purpose to work them in the face of the apathy and incredulity that at present exists regarding them. . . . I may state that, as Naturalist to the Indian Marine Survey, I have carefully, and I think thoroughly, explored the Bay of Bengal from False Point in the Mahanadi Delta, to Devi Point on the Kistna Delta; and as these explorations have extended over four years, I have had ample opportunity of correcting and verifying all my earlier conclusions." After minutely describing the various kinds of fish available he concluded, "I can only repeat the opinions expressed at the outset that the fisheries of the Bay of Bengal are of incalculable value, and that whoever has enterprise enough to take them up and strength of purpose and length of means to stick to them, will reap a manifold return. The only special question for consideration is that of carriage from sea to market."

In 1906, the Government of Bengal placed Mr. K. G. Gupta, C.S.I., I.C.S. (now Sir K. G. Gupta), a Senior Member of their Board of Revenue, on special duty in order to inquire into the same subject. He made a comprehensive and valuable report from which followed two important results—(1) His recommendation that a survey should be made of the fishery possibilities in the Bay of Bengal was immediately acted upon by Government and a typical steam trawler was set to work in the Bay under the direction of Dr. Travis Jenkins, of the Lancashire Sea Fisheries, who was specially engaged for the work; and (2) a Bengal Fishery Department was established. Dr. Jenkins also specially investigated the fishery possibilities of the Sunderbans.

The results obtained by Dr. Jenkins were of great importance. He showed that trawling could be carried on successfully throughout the year, and concluded that a properly organised scheme for developing the fisheries would yield a profitable return on capital invested. He indicated the lines on which these fisheries could be exploited.

While the sea fisheries of Bengal were thus investigated great industry was shown in the collection of information, in experimental work and in the initiation of breeding operations on scientific lines, in regard to the fresh water fisheries, in both rivers and tanks. The frequent overflowing of the great rivers in the rains and the necessity for studying the habits of the river fish added greatly to the work under this heading. The erection of weirs and the various irrigation schemes initiated in both provinces have also often wrought havoc with the fishery outlook.

The Fishery Department, after following up Dr. Jenkins' investigations, regard the Sunderbans fisheries as capable of furnishing yearly not far short of 200,000 maunds of fresh fish, while they point out that the area covered by the potential marine fisheries having been shown to be roughly 39,000 square miles, the supply from such a vast area must be well nigh inexhaustible. "From statistics which have been carefully compiled it has further been ascertained that the annual imports of fish to Calcutta from all sources roughly represent 26 per cent. of the actual requirements."

The future development of the fisheries on commercial lines will not only require some outlay of capital, but will also necessitate some advance in the general conditions and mental lot of the fishermen, because the low esteem in which the occupation of fishing and the dealing in fish is held has led to the whole industry being left in the hands of people with no capital, no education, no initiative and no business capacity. The most hopeful sign is officially stated to be the prospect of the spread of co-operative credit societies amongst fishermen in the near future. The situation is obviously one in which there is ample scope for a development of this kind. Meanwhile the Fisheries Department are carrying on persistent, careful and extensive propaganda work. As regards actual fishing, the Department are dividing their concentration on two points—(1) the possibility of increasing

the actual number of fish present, and (2) the possibility of capturing a larger proportion of existing fish without exhausting the natural supply.

A problem at the present time is the absence of fishery laws in Bengal. The Fishery Department point out that as some legislation has been found necessary in every other civilised country, in order to protect both fish and the community against the rapacity of man, it may be assumed that sooner or later legislation will be found necessary in Bengal. "At present we know so little regarding the habits of the commoner marketable fish, that we have not sufficient data on which to formulate any extensive Fishery Laws. The results of the scientific enquiries will enable us first to determine whether legislation is necessary or not, and then to define the nature and object of any laws desired."

## Burma.

The fisheries of Burma are important financially and otherwise. From time immemorial the exclusive right of fishing in certain classes of inland waters has belonged to the Government, and this right has been perpetuated in various fishery enactments, the latest of which is the Burma Fisheries Act of 1905. Fishing is also carried on along the coast, but the sea fisheries absorb but a small portion of industry. Most of the fishermen labour in the streams and pools, which abound particularly in the delta Districts. The right to work these fisheries, mentioned in the enactments alluded to above, is usually sold at auction, and productive inland waters of this kind often fetch very considerable sums. River fishing is largely carried on by means of nets, and generally yields revenue in the shape of licence fees for each net or other fishing implement used. Here and there along the coast are turtle banks which yield a profit to Government. In the extreme south the waters of the Mergui Archipelago afford a rich harvest of fish and prawns, mother-of-pearl shells and their substitutes, green snails and trochus, shark-fins, fish-maws, and beche-de-mer. Pearling with diving apparatus was introduced by Australians with Filipino and Japanese divers in 1893. They worked mainly for the shell, it being impossible for them to keep an effective check on the divers as regards the pearls. After about five years, when the yield of shell had decreased, they all left. The industry was then carried on by the Burmese.

## Bombay.

The Bombay sea fisheries are important and give employment to numerous castes, chief of which are the Kolis. Pomfret, sole, stone, and lady-fish are sold fresh, while others, such as the bombil, are salted and dried. Large quantities of small fry are sold as manure. The palls, found in the Indus, and the maral and mahseer are the principal fresh-water fish.

Sea-fishing is carried on by the Muhana tribe of Musalmans, who reside for the most part in hamlets near Karachi. The principal fish caught on the coast are sharks, rays, and skates. The pearl oyster is found at several

places, and the Mirs conducted pearl operations on their own account. Under British rule, the right has been let for a small sum, but the pearls are very inferior in size and quality, so that the industry has greatly declined during the last thirty years. At present practically no pearl fishing is carried on. Considerable fisheries also exist in the river Indus, chiefly for the fish known as palla, which are annually leased out by Government for about Rs. 20,000.

But for a province with such a length of sea board and with the estuary of the Indus within its borders the fishing population is singularly small. The fishing boats and appliances generally are very small and the fishermen do not go out in rough weather. The best fishing season is the cold weather months of December, January and February, and it is probable that with such a very brief season the harvest of the sea is not sufficient to support a larger population. The fishing castes frequently desert their caste occupation for others, according to the 1911 census report. When the two-groups, fishermen and fish dealers, are amalgamated there is a decrease of 9,000 in the aggregate, which can only be explained by their deserting their ancestral occupation.

The Government of Baroda, a State lying within the borders of the Bombay Presidency being desirous of introducing oyster culture into the coast districts of their State, have delegated a student to Pulicat, where the Madras Fisheries Department are engaged in similar work, and he is receiving practical instruction.

### Madras.

The Madras irrigation tanks usually contain coarse fish, the right of netting which is disposed of annually. The sea-fisheries along the coast employ thousands of persons, and the salting of the catches is a very considerable industry. The development of the fisheries of the Presidency is now under investigation by Government. Fish-curing is carried on in special yards under Government supervision, and is an important industry. The report of the Madras Fishery Department for 1913-14 stated that the principal operations under organisation were the West Coast station at Tanur for experimental curing, canning and the production of fish oil and guano; the oyster farm at Pulicat; the Sunkesula fish farm; the stocking of certain tanks; the preparation of important piscicultural projects, including the Tuticorin marine fish farm, the Nellore carp and murrel farm, the Colair Lake hilsa hatchery and murrel farm, the acclimatisation of tench on the plains, etc.; pearl and chank fishery; work in anti-malarial operations such as the breeding and distribution of larvicidal fish; the conservation of the upper waters of the Bhavani and Moyar on the lower slopes of the Nilgiris; the conservation and development of the trout in the Upper Nilgiris; and work by the newly appointed Oil Chemist.

At Tanur the percentage of first-class yellow oil now obtained averages above 50 per cent. of the output. This oil was recently described by a European buying firm as "unique" by reason of its purity, colour and slight odour.

The Oil Chemist attached to the department has also given it a high technical value. The profits ordinarily obtainable may be gauged by the fact that as against the single factory of 1908-09 there were at the close of 1914 no less than 211 private factories in Malabar and South Canara, the former district having two-thirds of the number.

The quantity of fish guano (that is, the dried product obtained from the boiled fish) from this part exported by sea alone increased—notwithstanding the shortness, etc., of the season—to 4,726 tons in 1914, as against 1,872 in 1913. The exports by road and rail are not known. The above weight of guano represents at least 25,000 tons of raw fish, so that the new method, due entirely to the work of the Department, is now taking an appreciable share in the fish manure trade, while the oils represents a gain hitherto lost.

Fish meal or scrap is very largely used in western countries as food for cattle, poultry, etc. Correspondence ensued in 1913 with the College of Agriculture at Combatores and a half-ton parcel of lightly salted and dried lean sardine was sent to the College in April, 1913. The experiments conducted there are said to have been very successful. The success or otherwise of the food turns largely on the question of price, which is very variable.

In 1912-13 instructions were sent out from Cornwall to treat fat sardines as pilchards, viz., to cure and harden the ungutted fish by several weeks in heavy salt (1 lb. salt to 3 of fish) and then to submit them to pressure in barrels when much of the oil is extracted, and the fish remain as a hard mass in the barrels. These are largely exported to Italy. It was found that the method was successful and a very good oil was obtained.

An inspection of the Palk Bay waters (between India and Ceylon) near Tondi resulted in the discovery of a fairly mature bed of oysters, estimated at twenty millions in number. The fact is remarkable because no pearl fishery or pearl oyster bed has ever been known before in the Palk Bay, which is north of the Pamban channel, all fisheries having hitherto taken place to the south in the Gulf of Manaar, where alone pearl oyster beds have been worked from time immemorial. There was drawn up during the year a scheme for cultivating the pearl oyster under controllable conditions in a regular farm, and for inducing the growth of pearls, both attached and free, in these controlled oysters. From Japanese facts it is almost certain that the farm will be very lucrative, even if only "attached" pearls are grown, but the Department are sanguine of success in inducing the growth of the more valuable "free" pearls, and have already forwarded a paper to the Linnæan Society with specimens of first results in this direction.

Progress was continued during 1915 without the development of any important branch of work. The Madras Government issued a Resolution on the retirement of Sir F. Nicholson, the honorary Director of the Fishery Department, warmly expressing their appreciation of his devoted service and initiative, versatility and energy in creating the Department and making its work a success.





**Agreement with China.**—The fluctuations in the revenue derived from opium are directly attributable to the trade conditions arising out of the limitation of opium exports. In 1907 being satisfied of the genuineness of the efforts of the Chinese Government to suppress the habit of consuming opium in China, the Government of India agreed to co-operate by gradually restricting the amount of opium exported from India to China. In 1908 an arrangement was concluded by which the total quantity of opium exported from India was to be reduced annually by 5,100 chests from an assumed standard of 67,000 chests. Under a further agreement, signed in May 1911, the cessation of the trade was to be accelerated on evidence being shown of the suppression of the native production of opium in China, and in accordance with this agreement a further limitation was placed on exports to Chinese ports. The reduction of exports led to an increase in the price of the drug in China and a corresponding rise in the price obtained in India at the

auction sales. For some considerable time, however, in 1912 the trade in China was paralysed by the imposition by Provincial Governors in defiance of instructions from the Central Government of restrictions on the importation and sale of Indian opium. Stocks accumulated rapidly at Shanghai and Hongkong and the position in December 1912 had become so acute that a strong and influential demand was made on the Government of India to relieve the situation by the suspension of sales. Sales were accordingly postponed both of Bengal and Malwa opium and in order to afford the Malwa trade the most complete relief, the Government of India undertook to purchase for its own use 11,253 chests of Malwa opium which remained to be exported in 1913. The present position is that the export trade to China has ceased since 1913. Exports to countries other than China amounted in 1915-16 to 8,786 chests (each of 140½ lbs.) valued at Rs. 147 lakhs. The average price realised at auction sales in that year was Rs. 1,719 per chest.

## GLASS AND GLASSWARE.

The total value of glass and glassware imported into India in 1915-16 increased by Rs. 13 lakhs to Rs. 1,53 lakhs, of which glass and glassware accounted for Rs. 1,06 lakhs and earthenware and porcelain for Rs. 47 lakhs, as against Rs. 96½ lakhs and Rs. 44 lakhs, respectively, in 1914-15. There has been a considerable falling-off under bangles and beads and false pearls on account of the cessation of trade with Austria-Hungary from which they were largely imported. Japan has supplied the Indian market with bangles, beads, bottles, funnels, globes, glass parts of lamps, sheet and plate glass, and tableware to the extent of Rs. 60 lakhs against Rs. 19 lakhs in 1914-15 and Rs. 16 lakhs in 1913-14, the increase being one of Rs. 40 lakhs or 205 per cent. over 1914-15, while imports from the United Kingdom rose by Rs. 3 lakhs or 14 per cent. to Rs. 24 lakhs. China also contributed Rs. 8 lakhs.

**Glass manufacture in India** consists of two well-defined classes, the indigenous household industry and the modern factory industry. The indigenous household industry, which is represented in all parts of the country, is chiefly concerned with the manufacture of cheap bangles. Glass manufacture in India on the modern factory system has hitherto been an uphill struggle against great difficulties. In Bengal, the Pioneer Glass Manufacturing Company, Limited, of Titagarh, started work in 1890 and the Bengal Glass Company of Sodapur in 1898. They ceased working in 1899 and 1902, respectively. The Madras Glass Works founded in 1909 has ceased work, though it is hoped to restart it. A factory started in Hyderabad also proved a failure and its plant was taken over by the Glass Works at Ambala. The Himalayan Glass Works at Rajpur in the Dehra Dun district closed after three or four years' working in 1908, but was restarted later under new management. Finally, the Upper

India Glass Works at Ambala, which was started by Indian capitalists in 1895, was at first a failure. Since 1903, however, it has been much more successful. It established itself firmly in its earlier years by specialising in the manufacture of bangle glass; and in this line it is interesting to record that the bangle glass of Ambala and Firozabad has succeeded in capturing the market, whereas formerly large quantities of glass used to be imported from Belgium for this purpose. At the present time one or two glass factories only are working in India, and a new factory, the Western India Glass Works, Limited, of Bombay, is about to start work.

Records of the earlier ventures have shown that the failures in some cases were due, in part at least, to preventible causes prominent among which were (1) the lack of sufficient fluid capital and the consequent inability of the companies to meet their heavy initial expenses, and (2) inexperience and lack of technical knowledge on the part of the promoters. But there are also certain real and special difficulties which glass manufacturers in India have to contend against. The principal difficulties are—(1) The temperature of India in the hot weather. (2) The difficulty of obtaining skilled labour for glass blowing. Both foreign blowers and men from local industries such as Nagina have been tried but neither have been entirely satisfactory. (3) There are considerable technical difficulties, such as the supply of a suitable quality of sand and a suitable alkali. With regard to the alkali, local sources, such as the *reh* of Northern India, have not yet given results adequate for the manufacture of high class glassware. At present imported bicarbonate of soda is mainly used. As this is imported from England there is no reason to anticipate any shortage of the supply. It is also probable that soda compounds will in time be locally manufactured in India.

## WILD BIRDS' PLUMAGE.

he Bill for prohibiting the importation into land of wild birds' plumage, which was introduced into Parliament in 1918, was the action of a fierce controversy on the nature of the plumage traffic. But organised opposition to the Bill failed to convince the public that the plumage trade was not one of great cruelty. Among well-authenticated cases from India to prove its cruelty was one from Karachi, in 1913, in which two men were fined for sewing the eyes of birds so that they should not hit in their cages. It was stated that this is a common practice of fishermen in Sind, to breed birds and export their feathers to England. This according to *The Times*, is only another apparent example of the way in which the prohibition on the export of plumage from India is notoriously evaded by smuggling to the open market of England, but shows how easily abuses might arise under any system which gave a general sanction to feather-farming. If legitimate methods of breeding birds for their plumage can be safeguarded as definite exceptions under an Act prohibiting importation; and only the exclusion by law of all plumage not so specified can put England on a par with the United States and of her own daughter Dominions in the suppression of a barbarous industry.

**Plumage birds.**—The birds most killed for account of their plumage in India are paddy birds, kingfishers, bustards, junglefowl, egrets, herons, paroquets, peafowl, and hoopoes, perhaps the most extensively killed in the East has been the Blue Jay (*Coracias Indica*). The smaller Egret is met with throughout India and Northern Burma. It is a pure white slim heron which develops during the breeding season a dorsal train of feathers, which elongates and becomes "decomposed" as it is expressed, that is to say, the barbs are separate and distinct from each other, thus forming the ornamental plume or aligrette for which these birds are much sought after and ruthlessly destroyed. Thirty years ago the exports were valued at over six lakhs in one year, but since 1895 the export trade has steadily diminished. But, though legitimate exports have been stopped, the trade is so lucrative as to lead to many attempts at smuggling. Within a recent period of 12 months the Bombay Preventive Department, for example, seized egret plumes worth Rs. 2,19,047 in India and £44,000 in London. The rupee value represents the sum which the exporters paid to those who took the feathers from the birds, so the loss to the trade was considerable. In addition, penalties varying from Rs. 5,000 to Rs. 10,000

each and amounting altogether to Rs. 59,175 were inflicted on the ten merchants concerned in attempting to export the feathers. A case was reported from Rangoon in 1916 of a man being found in possession of 22 lbs. of egret feathers valued at Rs. 66,000.

**Legislation.**—Indian legislation on the subject will be studied with interest by those who have followed the course of legislation on this subject in other countries. Until 1887 no legislation was considered necessary in India. An Act of that year enabled local governments and municipal and cantonment authorities to make rules prohibiting under penalties the sale or possession of wild birds recently killed or taken during their breeding seasons, and the importation into any municipal or cantonment area of the plumage of any wild birds during those seasons; and local governments were empowered to apply these provisions to animals other than birds.

Afterwards, in 1902, action was taken under the Sea Customs Act to prohibit the exportation of the skins and feathers of birds, except feathers of ostriches and skins and feathers exported *bona fide* as specimens illustrative of natural history. Act VIII of 1912 goes much further than the previous law. It schedules a list of wild birds and animals to which the Act is to apply in the first instance, enables local governments to extend this list, empowers local governments to establish "close times," presumably during the breeding seasons, in the whole of their territories or in specified areas, for wild birds and animals to which the Act applies, and imposes penalties for the capture, sale, and purchase of birds and animals in contravention of the "close time" regulations, and for the sale, purchase and possession of plumage taken from birds during the close time. There is power to grant exemptions in the interests of scientific research, and there are savings for the capture or killing by any person of a wild animal in defence of himself or of any other person, and for the capture or killing of any wild bird or animal in *bona fide* defence of property.

One defect in the law may be noticed. When an exporter is discovered, the Customs Department can on a magistrate's warrant have his house searched and seize the feathers found there to produce as evidence that he is engaged in the trade. But they have to return the feathers and can only take possession of them if they are discovered presently in course of export.

## BREWERIES.

Statistics compiled from official returns show that there were, in 1912, 22 breweries in British India, of which one did not work during the year. Fifteen of these are private property and seven are owned by six joint-stock companies with a nominal capital of Rs. 20,71,000, of which Rs. 22,26,290 was paid up at the end of 1912-13. Eight of the breweries are located at stations in the Himalayas from Murree to

Darjeeling. The largest brewery is the one at Murree, the Bangalore, Solon, Rawalpindi, Kasauli, Poona, and Mandalay, breweries standing next in the order shown. Production was largest in 1902, since when it has tended to decline, while imports of foreign beer have increased proportionately except during the war. In 1915 the production was over 2½ million gallons.

A substantial quantity of beer produced locally is consumed by the British troops in India. In 1907 the Army Commissariat purchased some 38 per cent. of the total production and the average purchases in the five years 1903-1907 amounted to 2,633,616 gallons yearly. From the 1st January, 1908, the contracts with Indian breweries for the supply of malt liquor to British troops have been discontinued, each British regiment being left free to make its own arrangements to obtain the necessary supply; as a result, the figures of Army consumption are no longer readily

available.

**Imports.**—In 1915-16 there were imported 2,921,000 gallons of malt liquors valued at Rs. 45 lakhs. Of this no less than 99 per cent. of beer in bulk, and 72 per cent. of bottled beer, were imported from the United Kingdom. During 1915-16, the imports from Japan amounted to 253,500 gallons, of which 248,000 gallons, or 18 per cent. were bottled beer against 64,000 gallons, or 5 per cent. in 1914-15. In 1915-16, nearly 9 per cent. of the total imports of beer were from Japan. There were also imports from Holland and Denmark

## GRAIN ELEVATORS.

The question of adopting elevators for the handling of Indian grain has engaged attention for some time and has assumed increased importance in the light of the railway congestion experienced in recent years and more particularly in the grain season. In the last three years great strides have been made by other countries in the adoption or perfecting of the elevator system, and a large mass of contemporary data on the subject has been brought together by the Commercial Intelligence Department. Since the subject is one that cannot receive adequate consideration in India till the facts are before the public, these have been embodied in a pamphlet entitled *Indian Wheat and Grain Elevators*, by the late Mr. F. Noel-Paton, Director General of Commercial Intelligence to the Government of India. The work gives full particulars regarding India's production of wheat, and shows that less than one-eighth of the crop is exported. It describes the conditions under which the grain is held and the risks that it runs. It is pointed

out that the cultivator has no adequate means of preserving his wheat and that he is constrained to sell at harvest time: also that the prices then obtained by him are considerably lower than those usually current in later months. The constant nature of the European demand is explained and an attempt is made to gauge the probability that the enormously increased quantities of wheat to be expected when new irrigation tracts come into bearing would be accepted by Europe at one time and at a good price, or could be economically transported under a system in which a few months of congestion alternated with a longer period of stagnation. Figures are given which suggest that in practice the effect of equipping railways to do this is to intensify the evil and so to engage in a vicious circle. The author explains the structural nature of elevators and their functions as constituted in other countries. Particulars are given as to the laws that govern their operations in such countries.

## TRADE MARKS.

The **Indian Merchandise Marks Act** (IV of 1889) was passed in 1889, but its operation in the earlier years was restricted, especially in Calcutta, in consequence of the lack of adequate Customs machinery for the examination of goods. In 1894, with the introduction of the present tariff, the Customs staff was strengthened for the examination of goods for assessment to duty, and this increase enabled examination to be made at the same time for the purposes of the Merchandise Marks Act. The Act was intended originally to prevent the fraudulent sale of goods bearing false trade marks or false trade descriptions (as of origin, quality, weight, or quantity). While the Act was before the Legislature a provision was added to require that all piece-goods should be stamped with their length in yards. In this respect these goods are an exception, for the Act does not require that other descriptions of goods should be stamped or marked, though it requires that when goods are marked the marks must be a correct description. The number of deten-

tions under the Act during the twenty years ending 1912-13 has been:—

Average of the five years ending		
ending	.. ..	1897-98 1,386
" " " " "	.. ..	1902-03 1,411
" " " " "	.. ..	1907-08 1,198
" " " " "	.. ..	1912-13 1,960

Detention is but rarely followed by confiscation, and there have been only 109 such cases during the stated twenty years. Usually, detained goods are released with a fine, and this procedure was followed in 19,282 cases out of the 29,774 detentions ordered in the same period. In 10,364 cases the detained goods were released without the infliction of a fine. In this period of twenty years 42 per cent. of the detentions were on account of the application of false trade marks or false trade descriptions. In 36 per cent. of the cases detention was ordered because the country of origin was either not stated or was falsely stated, and in 21 per cent. because the provisions of the Act for the stamping of piece-goods had been infringed.



**HIDES, SKINS AND LEATHER.**

India's local manufactures of skins and leather have steadily increased in recent years. Thus the exports of raw hides and skins has risen from £5,559,103 in 1908-09 to £7,845,484 in 1912-13 and the exports of leather from £2,761,169 to £3,082,498 in 1912-13. Previous to the outbreak of war, the trade in raw hides in this country was good; there was a large demand for hides, and prices ruled high. While in the continental markets stocks were high owing to overtrading in the previous year, the United States had a shortage which was estimated at approximately two million pieces. On the declaration of war, the trade which had up till then been brisk was seriously dislocated. Exports to enemy countries, especially to the great emporium of Indian hides, Hamburg, were stopped, and exporters had to find new markets for the raw material. The raw hide business of India, it is well known, has hitherto been largely, if not quite entirely, in the hands of German firms or firms of German origin. Germany has had the largest share of India's raw hides. In the four months before the outbreak of war she took 39 per cent. of the total exports. In 1912-13 she took 82 per cent, and in 1913-14, 85 per cent. Raw hides were exported to Trieste in considerable quantities whence they were taken to Germany or Austria. In the four months before the outbreak of war 15 per cent of India's exports passed through Trieste; in 1913-14 the percentage was 21.

The year's exports of raw hides in 1914-15 declined from 55,787 tons, valued at Rs. 8½ crores (£5½ millions), to 35,096 tons, valued at Rs. 5½ crores (£3½ millions). The exports of raw skin fell from 24,328 tons, valued at Rs. 3½ crores (£2½ millions), to 20,422 tons, valued at Rs. 2½ crores (£1½ millions). The total exports of hides and skins, tanned or dressed, increased in 1914-15 by 10 per cent. in quantity to 834,425 cwts and by 12 per cent. in value to Rs. 4½ crores. Madras ports accounted for 74 per cent. of the total exports of tanned hides, and 83 per cent. of skins, dressed or tanned, and practically the whole of the remainder was shipped from Bombay.

The trade in hides and skins, as also the craft in leather manufacture, are in the hands either

of Mahomedans or of low caste Hindus, and are on that account participated in by a comparatively small community. The traffic is subject to considerable fluctuations concomitant with the vicissitudes of the seasons. In famine years for instance the exports of untanned hides rise to an abnormal figure. The traffic is also peculiarly affected by the difficulty of obtaining capital and by the religious objection which assigns it to a position of degradation and neglect; it has thus become a monopoly within a restricted community and suffers from the loss of competition and popular interest and favour.

No large industry has changed more rapidly and completely than that of leather. By the chrome process, for example, superior leather may be produced from the strongest buffalo hides in seven days, from cowhide in twenty-four hours, and from sheep and goat skins in six to eight hours; and these operations formerly took thirty days or as much as eighteen months. Of these changes the native tanners of India were slow to take advantage, but in spite of general backwardness the leather produced by some of the tanneries, especially those under European management, is in certain respects equal to the best imported articles. But as a result of India being slow to adopt up-to-date methods, there has been a decline in the demand for Indian dressed skins, while the demand for raw skins has increased considerably. The chief tanneries are situated at Cawnpore, Calcutta and Bombay.

**Indigenous methods.**—India possesses a large selection of excellent tanning materials such as *Acacia* pods and bark, Indian *sumach*, the Tanner's *cassia*, *Mangroves*, and *Myrabolans*. By these and such like materials and by various methods and contrivances, hides and skins are extensively cured and tanned and the leather worked up in response to an immense, though purely local, demand. But the inferior quality of the leather so used by effete methods may be illustrated by the fact that the articles produced rarely fetch much more than one-fourth the value of the corresponding articles made of imported or Cawnpore (European factory) leather.

## INDIAN COMMERCIAL CONGRESS.

A proposal was recently made by the Hon'ble Sir Fazulbhoy Currimbhoy for the holding of periodical conferences of representatives of the several Chambers of Commerce in India. The suggestion was taken up by the Indian Merchants' Chamber and Bureau in Bombay and that body forwarded to the several Chambers of Commerce and Commercial Associations a Draft Constitution of the proposed Indian Commercial Congress. The objects of the Congress are stated as follows:—(1) The Indian Commercial Congress is founded for the purpose of promoting by all legitimate and constitutional methods the best interests of trade, commerce and manufactures of the country and all cognate matters connected therewith. (2) For the fulfilment of the objects aforesaid, the Congress shall hold its session from time to time as occasion may demand, but at least once every three years, at such place and at such date as may be determined, discuss all mercantile and industrial affairs, prepare and submit representations thereon to the Provincial Governments, or the Government of India or the Secretary of State or the British Parliament or other authorities for the removal and prevention of injurious commercial measures and the introduction of others which may be calculated to promote the general commercial and other cognate interests of the country, and otherwise

to take such action as may be conducive to the accomplishment of the objects in view. The Congress is to consist of delegates from such Chambers, Associations, etc., throughout India as may be recognised in that behalf by "the Congress in open session" and these delegates shall elect a Committee of Management on which proportional representation (not yet specified) shall be assigned to principal commercial centres enumerated. The President and Vice-President are to be appointed by a Special Committee appointed by the Congress in open session.

The first meeting of the Commercial Congress was held in Bombay in December, 1915. A circular summarising the progress already made points out that while the original idea was to hold the Commercial Congress either annually or bi-annually, this has developed into a project to give the movement a more concrete, tangible and permanent form by the establishment of a Chamber which will be the chambers of commerce and commercial associations and be fully representative of their interests. Thus, all the leading commercial associations in Bombay were represented in the Reception Committee of the first Congress and they issued and circulated a draft constitution of the proposed Associated Indian Chamber of Commerce.

## INVENTIONS AND DESIGNS.

A handbook to the Patent Office in India, which was published in 1916 by the Government Press, Calcutta, gives the various Acts, rules, and instructions bearing on the subject together with hints for the preparation of specifications and drawings, hints for searchers and other valuable information that has not hitherto been readily accessible to the general public in so convenient a form. In the preface Mr. H. G. Graves, Controller of Patents and Designs, explains the scope of the Patent laws in India and indicates wherein they differ from English law and procedure.

The foundation of patent legislation throughout the world lies in the English "Statute of Monopolies" which was enacted in 1623, the 21st year of King James the First. In part this Act has been repealed but the extant portion of the more important section 6 is as follows:—"Provided also that any declaration before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under, hereafter to be made of the sole working or making of any manner of new manufactures within this realm to the true and first inventor and inventors of such manufactures, which others at the time of making of such letters patent and grants shall not use, so as also they be not contrary to the law nor mischievous to the State by raising prices of commodities at home, or hurt of trade, or generally inconvenient; the said fourteen years to be accomplished from the date of the first letters patent or grants of such privilege hereafter to be made, but that the same shall be of such force as they should be if this Act had never been made, and of none other."

The existing Indian patent law is contained in the Indian Patents and Designs Act, 1911, supplemented by the Indian Patents and Designs (Temporary Rules) Act, 1915, and by the Rules made under those Acts. The Patent Office does not deal with trade marks or with copyright generally in books, pictures, music and other matters which fall under the Indian Copyright Act III of 1914. There is, in fact, no provision of law in British India for the registration of Trade Marks which are protected under the Merchandise Marks Act (IV of 1889) which forms Chapter XVIII of the Indian Penal Code.

On the whole, Indian law and procedure closely follow that in the United Kingdom for the protection of inventions and the registration of designs, as they always have done in matters of major interest. One main difference exists, however, as owing to the absence of provision of law for the registration of trade marks, India cannot become a party to the International Convention under which certain rights of priority are obtainable in other countries.

The first Indian Act for granting exclusive privileges to inventors was passed in 1856, after an agitation that had been carried on fitfully for some twenty years. Difficulties arising from an uncertainty as to the effect of the Royal Prerogative prevented earlier action, and, owing to some informality the Act itself was repealed in the following year. In 1859 it was re-enacted with modifications, and in 1872 the Patents and Designs Protection Act was passed. The protection of Inventions Act of 1883, dealing with exhibitions, followed, and

under the Inventions and Designs Act of 1888. These are now replaced by the present Act of 1911.

The existing Acts extend to the whole of British India, including British Baluchistan and the Santal Parganas. This of course includes Burma but it does not embrace the Native States. Of the latter three, viz., (1) Hyderabad Deccan, (2) Mysore, (3) Gwalior have ordinances of their own, for which particulars must be obtained from the Government of the States in question as they are not administered by the Indian Patent Office in Calcutta. The object of the Act of 1911 was to provide a simpler, more direct, and more effective procedure in regard both to the grant of patent rights and to their subsequent existence and operation. The changes made in the law need not here be referred to in detail. They gave further protection both to the inventor, by providing that his application should be kept secret until acceptance, and to the public, by increasing the facilities for opposition at an effective period. At the same time a Controller of Patents and Designs was established, with power to dispose of many matters previously referred to the Governor-General in Council, and provision was made for the grant of a sealed "patent" instead of for the mere recognition of an "exclusive privilege." The provisions of the Act follow with the necessary modifications those of the British Inventions and Designs Act of 1907.

The annual report of the Indian Patents Office for 1915 states that the effect of the war

has been very marked during the year under review, but has not materially affected the nature of inventions. The number of applications fell from 705 in 1913 to 588 in 1914 and to 445 in 1915, a decrease of practically one-third. The income of the Office however largely depends on the continuance of fees paid to keep in force patents of which the number granted has grown from year to year so that the reduction in application and sealing fees is largely compensated and the total reduction is only Rs. 2,400 as compared with 1913, (Rs. 69,760 instead of Rs. 72,159 in 1913 and Rs. 73,159 in 1914.)

Under the existing Act 1,775 patents have been sealed of the 2,416 applications made under section 3 and all of these were in force on December 31st, 1915. Applications for patent by enemy subject are permitted, but as a rule are held in suspense and the sealing of patents on their applications is not affected for the present. Patents in existence are however, renewable at the option of the holder even if he be an enemy as it is not considered desirable that the property therein should be destroyed. It can, however, be alienated or utilised for the benefit of the public on application. Provision for these proceedings is made by a License Act, and rules introduced after the year. In their main lines the License Act and rules follow the practice in the United Kingdom. They enable the controller to deal with patents held by enemy subjects and remove the disabilities under which any person may suffer in respect of patents or designs owing to the present state of the war.

## COPYRIGHT.

There is no provision of law in British India for the registration of Copyright. Protection for Copyright accrues under the Indian Copyright Act under which there is now no registration of rights but the printer has to supply copies of these works as stated in that Act and in the Printing Presses and Books, Act XXV of 1867. The Indian Copyright Act made such modifications in the Imperial Copyright Act of 1911 as appeared to be desirable for adapting its provisions to the circumstances of India. The Imperial Act of 1911 was brought into force in India by proclamation in the *Gazette of India* on October 30, 1912. Under s. 27 of that Act there is a limited power for the legislature of British possessions to modify or add to the provisions of the Act in its application to the possession, and it is under this power that the Indian Act of 1914 was passed. The portions of the Imperial Act applicable to British are scheduled to the Indian Act. The Act to which these provisions are scheduled makes some formal adaptations of them to Indian law and procedure, and some material modi-

fications of them in their application to translations and musical compositions. In the case of works first published in British India the sole right to produce, reproduce, perform or publish a translation is, subject to an important proviso, to subsist only for ten years from the first publication of the work. The provisions of the Act as to mechanical instruments for producing musical sounds were found unsuitable to Indian conditions. "The majority of Indian melodies" it was explained in Council, "have not been published, i.e., written in staff notation, except through the medium of the phonograph. It is impossible in many cases to identify the original composer or author, and the melodies are subject to great variety of notation and tune. To meet these conditions s. 5 of the Indian Act follows the English Musical Copyright Act of 1902 by defining musical work as meaning any combination of melody and harmony, or either of them, printed, reduced to writing, or otherwise graphically produced or reproduced."

# Coinage, Weights and Measures.

As the currency of India is based upon the rupee, statements with regard to money are generally expressed in rupees, nor has it been found possible in all cases to add a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2s., or one-tenth of a £, and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000=£100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1s. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise the exchange value of the rupee to 1s. 4d., and then introduce a gold standard at the rate of Rs. 15=£1. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1s. 4d., and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000=£100- $\frac{1}{3}$ =(about) £67.

**Notation.**—Another matter in connection with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A **lakh** is one hundred thousand (written out as 1,00,000), and a **crore** is one hundred lakh or ten millions (written out as 1,00,00,000). Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899, while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

**Coinage.**—Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both Natives and Europeans. The anna was formerly reckoned as  $\frac{1}{4}$ d., it may now be considered as exactly corresponding to 1d. The anna is again sub-divided into 12 pies.

**Weights.**—The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras

and Bombay, may be thus expressed one maund 40 seers, one seer=16 chittaks or 80 tolas. The actual weight of a seer varies greatly from District to District, and even from village to village, but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. The standard is used in official reports.

**Retail.**—For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change what varies is not the amount of money to be paid for the same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumption that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1s. 4d., 1 seer per rupee=(about) 3 lb. for 2s., 2 seers per rupee=(about) 6 lb. for 2s., and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have been expressed in this work either in square miles or in acres.

**Proposed reforms.**—Indian weights and measures have never been settled upon an organised basis suitable for commerce and trade characteristic of the modern age. They vary from town to town and village to village in a way that could only work satisfactorily so long as the dealings of towns and villages were self-contained and before roads and railways opened up trade between one and the other. It is pointed out that in England a hogshead of wine contains 63 gallons and a hogshead of beer only 54 gallons; that a bushel of corn weighs 46 lbs. in Sunderland and 240 lbs. in Cornwall; that the English stone weight represents 14 lbs. in popular estimation, but only 5 lbs., if we are weighing glass, and eight for meat, but 6 lbs. for cheese. Similar instances are multiplied in India by at least as many times as India is bigger than land. If we take, for instance, the denomination of weight common in India, we shall find that in a given area are nearly as many maunds as there are to weigh. If we consider the difference between district and district the result is worse. Thus in the United Provinces the maund of sugar weighs 48 pore, 40 in Muttra, 72½ in Agra, 50 in Moradabad, 45 in Bareilly, 46 in Fyzeeabad, 51 in Goshwari.



# Legislation and Inspection.

The conditions of factory labour until 1913 were regulated by the Indian Factories Act of 1881, as amended in 1891. The chief provisions of the amended Act were Local Governments were empowered to appoint inspectors of factories, and certifying surgeons to certify as to the age of children. A mid-day stoppage of work was prescribed in all factories, except those worked on an approved system of shifts, and Sunday labour was prohibited, subject to certain exceptions. The hours of employment for women were limited to 11, with intervals of rest amounting to at least an hour and a half; their employment between 8 p.m. and 5 a.m. was prohibited, as a general rule, except in factories worked by shifts. The hours of work for children (defined as persons below the age of 14) were limited to seven, and their employment at night time was forbidden, children below the age of nine were not to be employed. Provision was made for the fencing of machinery and for the promulgation of rules as to water supply, ventilation, the prevention of overcrowding, etc.

## Act of 1911.

The decision to undertake further legislation was arrived at after comprehensive inquiries. An important factor in the case was the increasing use of electric light in the Bombay Mills, which radically changed the conditions prevailing when the Act of 1891 was passed and had abolished the security that operatives would not be employed for more than 12 hours a day on the average. The question of the hours of employment in textile factories was brought into prominence by the period of prosperity that the cotton industry began to enjoy in the cold weather of 1904-05, a large number of persons operatives being regularly worked for 15 hours a day or even longer.

Owing to complaints regarding the long hours worked in many mills, the Government of India in 1906 appointed a small Committee with Commander Sir H. P. Freer Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of labour in textile factories. The Committee recommended that the working hours of adult males should be limited to 12 hours a day, that certificates of age and physical fitness should be required prior to half-time employment and prior to employment as an adult, that night work of women should be prohibited; and that whole-time Medical Inspectors should be appointed.

The conclusions of this Committee formed the basis of an investigation, extending to all factories in India, by a representative Commission. This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally in textile factories. The majority of the Commission recommended a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons" between 15 and 17 years of age, whose hours should be limited to 12, and con-

sidered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

## Hours fixed.

The recommendations of the Committee and of the Commission having been considered by the Government of India and the Local Governments, a Bill was introduced in July 1908 to amend and consolidate the law relating to factories, and was finally passed into law as Act XII of 1911.

The new Act extended the definition of "factory" so as to include seasonal factories working for less than four months in the year, shortened the hours within which children (and, as a general rule, women) may be employed, and further restricted the employment of women by night by allowing it only in the case of cotton-ginning and pressing factories. It also contained a number of new provisions for securing the health and safety of the operatives, making inspection more effective, and securing generally the better administration of the Act. The most important feature of the Act, however, was the introduction of a number of special provisions applicable only to textile factories. The report of the Factory Commission showed that excessive hours were not worked except in textile factories. The Act for the first time applied a statutory restriction to the hours of employment of adult males by laying down that, subject to certain exceptions, "no person shall be employed in any textile factory for more than twelve hours in any one day." It is also provided in the case of textile factories that no child may be employed for more than six hours in any one day, and that (subject to certain exceptions, among which are factories worked in accordance with an approved system of shifts) no person may be employed before 5-30 a.m. or after 7 p.m. (the new limits laid down generally for the employment of women and children). Corresponding limitations are placed on the period for which mechanical or electrical power may be used.

## Factory Inspection.

The inquiries of the Factory Commission showed that the then existing system of factory inspection had not sufficed to prevent widespread evasion of the provisions of the factory law. This result was attributed to the fact that the number of full-time factory inspectors was very small, the work of inspection being to a large extent in the hands of ex-officio inspectors (District Magistrates, Civil Surgeons, etc.) who, as the Commission reported, had neither the time nor the special knowledge necessary for the work. In Bombay Presidency, where there were three special inspectors, it was reported that the Act was on the whole, well enforced. Steps have been taken since to reorganise the staff of whole-time inspectors of factories in India and to

increase it to a strength sufficient to cope with the work of inspecting all the factories in India. The total strength of the staff is now 14, as compared with 6 at the time of the Factory Commission's report. Each of the larger provinces has at least one inspector. Bombay having five. Except that in a few cases these officers have duties also in connection with boiler inspection, their whole time is given to factory inspection. The District Magistrate remains an inspector, ex-officio, under the new Act, and other officers may be appointed additional inspectors, but it is contemplated that inspection by ex-officio inspectors will be to a large extent discontinued, or limited to special cases.

### FACTORIES INSPECTED UNDER THE FACTORY ACT IN 1914.

PROVINCE.	Number of Factories working and liable to be inspected.	Average Number of Hands employed daily.	Number of Persons convicted for breach of Act.	Number of Accidents Reported.			
				Fatal.	Serious.	Minor.	Total.
Bengal .. ..	361	3,54,686	12	48	354	771	1,173
Bihar and Orissa ..	46	28,380	....	13	101	301	415
United Provinces ..	217	62,538	9	4	97	356	457
Punjab .. ..	201	31,243	30	11	53	163	227
North-West Frontier Province.	4	473	....	....	....	....	....
Burma .. ..	450	64,601	12	9	75	280	364
Central Provinces and Berar.	438	47,150	56	....	43	119	162
Madras .. ..	391	81,217	19	7	16	369	392
Bombay .. ..	777	2,63,386	24	20	48	1,532	1,600
Assam .. ..	15	2,714	....	1	3	7	11
Ajmer-Merwara ..	18	11,837	....	1	5	109	115
Delhi .. ..	18	2,539	....	....	3	10	13
TOTAL IN 1914 ..	2,936	9,50,973	162	114	798	4,017	4,929

There are no publications from which a complete statistical survey of the various branches of insurance work in India can be obtained, but the official "Statements of Accounts and Abstracts of Actuarial Reports in respect of 70 Life Assurance Companies doing business in British India," published by the Government of India, give much information in regard to Life Assurance Companies subject to all the provisions of the Indian Life Assurance Companies Act, 1912, and some of those which are partially exempt from the Indian Act on the ground that they carry on business in the United Kingdom and comply with the provisions of the British Assurance Companies Act of 1909. It should be noticed that the various pension funds connected with Government services are exempt from the compliance with the Indian Act.

The oldest of the Indian Companies were established in Madras about 80 years ago: Bombay has none older than the Bombay Mutual, the Oriental and the Bombay Widows' Pension Fund which were established about 40 years ago. Life Assurance seems not to have been started in Bengal until much later, and it was not until 1906 that many Companies were established either in that Presidency or elsewhere in India.

In his introductory note to the official publication already mentioned, Mr. H. G. W. Melkic, Actuary to the Government of India, states that the total amount of the investments and other realisable assets of Indian Companies is worth nearly 6½ crores of rupees; more than two-thirds of this, however, represent the investments of one Company, namely, the Oriental of Bombay.

During the period to which the accounts not published relate, ordinary Life Assurance policies for nearly 3½ crores of rupees were issued by Indian Life Assurance Companies and the total sum assured under policies remaining in force at the end of the period was about 22 crores of rupees. Over three quarters of this sum was under Endowment Assurance policies which provide for payment of the sum assured at the end of a stipulated period or at the death of the Life Assured if it occur previously—thereby making provision against old age as well as against early death. A comparison of the figures with those of the previous year, so far as they are available, indicates a considerable increase both in the amount of insurances granted each year as well as in the total sums assured remaining in force at the end of the period.

In addition to the above-mentioned sums, considerable number of Life Assurance Policies of the **dividing society** type were issued. Life Assurance business of this nature, where the sum assured is not fixed but depends on the division of a portion of each year's premium income amongst the claims in that period either equally or in proportion to the total of such premiums paid under each, is unsound. But it is hoped that the information to be published in the future will convince all those interested of the undesirability of continuing to issue such policies. 20 Indian Companies are known to transact other business, in addition to Life Assurance. Mr. Melkic in his report points out various defects in the accounts of Indian Companies, and gives various explanations and suggestions in connection with the proper keeping of accounts.

The following is the list of British, Colonial and Foreign Companies doing business both in the United Kingdom and in India partially exempted from the Indian Act, and the classes of business, in addition to Life Assurance, transacted by them:—

Name of Company.	Place of Head Office.	Life Annuities.	Annuities certain Capital redemption, etc.	Fire.	Marine.	Personal Accident and Sickness.	Employers' Liability.	Burglary and Fidelity Guarantee.
1. Alliance .. ..	London .. ..	a	C	F	M	P	E	G
2. Atlas .. ..	London .. ..	a	C	F	M	P	E	G
3. Commercial Union ..	London .. ..	a	C	F	M	P	E	G
4. Gresham .. ..	London .. ..	a	C	F	..	P	E	G
5. Law Union and Rock ..	London .. ..	a	C	F	..	P	E	G
6. Liverpool and London and Globe .. ..	Liverpool ..	a	C	F	M	P	E	G
7. National Mutual .. ..	London .. ..	a	C	..	..	..	..	..
8. North British and Mercantile .. ..	Edinburgh ..	a	C	F	..	..	..	..
9. Northern .. ..	Aberdeen ..	a	C	F	..	P	E	G
10. Norwich Union .. ..	Norwich .. ..	a	C	F	..	P	E	G
11. Phoenix .. ..	London .. ..	a	C	F	M	P	E	G
12. Royal .. ..	Liverpool ..	a	C	F	M	P	E	G
13. Royal Exchange .. ..	London .. ..	a	C	F	M	P	E	G
14. Scottish Union and National .. ..	Edinburgh ..	a	C	F	..	P	E	G
15. Standard .. ..	Edinburgh ..	a	C	..	..	..	..	..
16. Manufacturers .. ..	Canada .. ..	a	..	..	..	..	..	..
17. Sun of Canada .. ..	Canada .. ..	a	C	..	..	P	..	..
18. National Mutual of Australasia .. ..	Australia ..	a	..	..	..	..	..	..
19. New York .. ..	United States ..	a	..	..	..	..	..	..
20. China Mutual .. ..	Shanghai ..	a	..	..	..	..	..	..



In the following list the names of the existing Indian Life Assurance Companies have been arranged according to the date of establishment under the Province in which they were established:—

Year.	Madras.	Bombay.	Bengal.	Punjab.	United Provinces, Assam, Ajmer- Merrwa.
1829 ..	Madras Equitable (exempted under Section 41 of the Act).	....	....	....	....
1833 ..	Madras Widows' ..	....	....	....	....
1847 ..	....	....	....	Christian Mutual	....
1849 ..	Tinnevely C. M. S. Widows' Fund.	....	....	....	....
1871 ..	....	Bombay Mutual	....	....	....
1874 ..	....	Oriental	....	....	....
1876 ..	....	Bombay Widows'	....	....	....
1885 ..	....	Goanese Mutual	....	....	....
1886 ..	....	....	....	....	....
1887 ..	....	....	....	....	....
1888 ..	Mangalore Roman Catholic	B. B. & C. I. Zoroastrian ..	....	....	....
1889 ..	....	Bombay Zoroastrian	....	....	....
1890 ..	....	....	....	....	....
1891 ..	....	Gujarat Zoroastrian	Hindu Provident Fund ..	....	....
1892 ..	....	Indian Life	....	....	....
1893 ..	....	....	....	....	Indian Empire Branch of Reclaimers (United Provinces)
1894 ..	....	....	....	....	....
1895 ..	....	....	....	....	....

In the following list the names of the existing Indian Life Assurance Companies have been arranged according to the date of establishment under the Province in which they were established :—

Years.	Madras.	Bombay.	Bengal.	Punjab.	United Provinces, Assam, Ajmer- Merwara.
1896	....	Empire of India	....	Bharat	....
1897	....	....	....	..	....
1898	....	....	....	....	....
1899	....	....	....	....	....
1900	....	....	....	....	....
1901	....	....	....	Mutual Help	....
1902	....	....	....	....	....
1903	....	....	North Indian Circars	....	....
1904	....	....	....	....	....
1905	....	....	....	....	....
1906	Coromandel; United India	All India United	.. National Indian; National Insurance.	Co-Operative	....
1907	....	....	Hindusthan Co-Operative..	National Insurance and Banking.	....
1908	....	Bombay Life	.. Eastern; Indus Liqueable.	Hindusthan (Gujranwala) ...	General (Ajmer Merwara).
1909	....	....	Chittagong	....	....
1910	....	....	Bengal Provident	Popular	....
1911	....	Asian Commercial	.. Star of India Universal;	....	Aryya (Assam).
1912	....	....	Unique; Victoria	....	....
1913	....	Industrial & Prudential; Light of Asia; Provincial.. Western India; East and West.	..	....	....
1914	....	....	....	British Indian	....

## Chambers of Commerce.

Modern commerce in India was built up by merchants from the west and was for a long time entirely in their hands. Chambers of Commerce and numerous kindred Associations were formed by them for its protection and assistance. But Indians have in recent years, taken a large and growing part in this commercial life. The extent of their participation varies greatly in different parts of India, according to the natural proclivities and genius of different races. Bombay, for instance, has led the way in the industrial and commercial regeneration of the new India, while Bengal, very active in other fields of activity, lags behind in this one. Arising from these circumstances we find Chambers of Commerce in Bombay, Karachi, Calcutta, Madras and other important centres, with a membership both European and Indian; but alongside these have sprung up in recent years certain Associations, such as the Bombay Indian Merchants' Chamber and Bureau, of which the membership is exclusively Indian. These different classes of bodies are in no sense hostile to one another and constantly work in association.

The London Chamber of Commerce in 1912, realising the increasing attention demanded by the economic development of India, took steps to form an "East India Section" of their organization. The Indian Chambers work harmoniously with this body, but are in no sense affiliated to it, nor is there at present any inclination on their part to enter into such close relationship, because it is generally felt that the Indian Chambers can themselves achieve their objects better and more effectively than a London body could do for them, and on various occasions the London Chamber, or the East India Section of it have shown themselves out of touch with what seemed locally to be immediate requirements in particular matters.

A new movement was started in 1913 by the Hon. Sir Fazulbhoy Currimbhoy Ibrahim, a leading millowner and public citizen of Bombay, which promises to lead to great improvement in strengthening Indian commercial organization. Sir Fazulbhoy's original plan was for the formation of an Indian Commercial Congress. The proposal met with approval in all parts of India. The scheme was delayed by the outbreak of war but afterwards received an impetus from the same cause and the first Congress was held in the 1915 Christmas holiday season in the Town Hall, Bombay. The list of members of the Reception Committee showed that all the important commercial associations of Bombay were prepared to co-operate actively.

The Congress was attended by several hundred delegates from all parts of India. Mr. D. E. Wacha, President of the Bombay Indian Merchants' Chamber, presided, as Chairman of the Reception Committee, at the opening of the proceedings and the first business was the election of Sir Fazulbhoy Currimbhoy as the first President. The Congress resolved upon the establishment of an Associated Indian Chamber of Commerce, and elected a Provincial Committee empowered to take the necessary

enrol members and carry on work as Committee of the Chamber until a new Committee should be appointed a year later. The Congress also approved of the draft constitution.

The following are the principal paragraphs of a Memorandum of Association of the new Associated Chamber as approved by the Congress.—

I. The name of the Chamber will be "THE ASSOCIATED INDIAN CHAMBER OF COMMERCE."

II. The Registered Office of the Chamber will be in Bombay.

III. The objects for which the Chamber is established are:—

- (a) To discuss and consider questions concerning and affecting trade, commerce, manufactures, and the shipping interests, at meeting of delegates from Indian Chambers of Commerce and Commercial Associations or Bodies and to collect and disseminate information from time to time on matters affecting the common interests of such Chambers or Associations or Bodies and the commercial, manufacturing and shipping interests of the country.
- (b) To communicate the opinions of the Chambers of Commerce and other Commercial Associations or Bodies separately or unitedly, to the Government or to the various departments thereof, by letter, memorial, deputation or otherwise.
- (c) To petition Parliament or the Government of India or any Local Government or authority on any matter affecting trade, commerce, manufacture or shipping.
- (d) To prepare and promote in Parliament or in the Legislative Councils of India, both Imperial and Provincial, Bills in the interest of trade, commerce, manufactures, and shipping of the country and to oppose measures which, in the opinion of the Chamber, are likely to be injurious to those interests.
- (e) To attain those advantages by united action which each Chamber or Association or body may not be able to accomplish in its separate capacity.
- (f) To have power to establish an office either in England or in any part of British India with an Agent there, in order to ensure to the various Chambers early and reliable information on matters affecting their interests and to facilitate communication between the Chamber or individual chambers and the Government or other public bodies, and generally to conduct and carry on the affairs of the Chamber.
- (g) To organise Chambers of Commerce, Commercial Associations or Bodies in different trade centres of the Country.
- (h) To convene when necessary the Indian Commercial Congress at such places and at such times as may be determined by a Resolution of the Chamber.
- (i) To do all such other things as may be incidental or conducive to the above objects.

The Articles of Association provide for the management of the Chamber by an Executive Council composed of a President, Vice-President, and ten other members elected at the annual meeting of the Associated Chamber, the Executive Council to present a report and statement of accounts at each annual meeting. The Articles declare the number of members of the Associated Chamber not to exceed one hundred, and the Executive Council are given power to elect honorary members. "There

shall be an annual meeting of the Associated Indian Chamber held at Bombay on a date to be fixed by the Executive Council in the month of February," or at some other time, and "semi-annual or special meetings . . . may be convened by the Executive Council or on the requisition of one-third of the total number of members addressed to the Secretary . . ."

The following are details of the principal Chambers of Commerce and kindred bodies in India at the present time :—

## BENGAL.

The Bengal Chamber of Commerce was founded in 1834. Its head-quarters are in Calcutta. Other societies connected with the trade and commerce of the city are the Royal Exchange, the Bengal Bonded Warehouse Association, the Calcutta Trades Association and the Bengal National Chamber of Commerce. The Bengal Chamber is registered with a declaration of membership of 200. Its objects are the usual purposes connected with the protection of trade "in particular in Calcutta." There are two classes of members, Permanent and Honorary.

Merchants, bankers, shipowners, representatives of commercial, railway and insurance companies, brokers, persons and firms engaged in commerce, agriculture, mining or manufacture, and joint stock companies or other corporations, formed for any purpose or object connected with commerce, agriculture, mining or manufacture, and persons engaged in or connected with art, science or literature, may be elected as permanent members of the Chamber.

A candidate for election as a permanent member, whether an individual, a firm or a joint stock company or other corporation, must be proposed by one and seconded by another permanent member, and may be elected provisionally by the Committee, but that election is subject to confirmation at the next annual general meeting. The subscription to the funds of the Chamber of permanent members residing or carrying on business in Calcutta is Rs. 25 per mensem, and that of permanent members residing or carrying on business elsewhere than in Calcutta Rs. 32 per annum. No entrance fee is charged. Honorary members are not required to subscribe to the funds of the Chamber. Officials and others indirectly connected with the trade, commerce or manufactures of Bengal, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected honorary members by the Committee upon the proposal of any two permanent members whether members of the Committee or not. Strangers visiting the Presidency may be admitted by the Committee as honorary members for a period not exceeding two months on the proposal of any permanent member whether a member of the Committee or not. Honorary members are entitled to receive the last published report of the Committee, and to attend and speak but not to vote at any general meeting held during their membership, and may upon the invitation of the President, Vice-President or Chairman, as the case may be, attend under the like conditions any meeting of Committee or of any departmental committee or sub-committee.

The affairs of the Chamber are conducted by the following officers, namely, a President, Vice-President, seven ordinary members of Committee, a Secretary and two Assistant Secretaries and an Auditor. The Officers of the Chamber, with the exception of the Secretary, Assistant Secretaries and Auditor, act without remuneration. The following are the President and his Committee appointed for the year 1916-1917 :—

*President.*—Hon. Sir F. H. Stewart, Kt., C.I.E., (Gladstone, Wyllie & Co.)

*Vice President*—Hon. Mr. E. H. Bray (Gillanders, Arbuthnot & Co.)

*Committee.*—The Hon. Mr. Archy Birkmyre (Birkmyre Bros.), Messrs. K. W. E. Crum (Graham & Co.), H. Harris (Chartered Bank of India, Australia and China) D. Carmichael (Mackinnon, Mackenzie & Co.), the Hon. Mr. W. A. Ironside (Bird & Co.), Sir R. S. Light, Kt. (East Indian Ry.) and Mr. R. V. Mansell (Jas. Finlay & Co., Ltd.).

The Secretary of the Chamber is Mr. H. M. Haywood. Asst. Secs.—Mr. D. K. Cunlison and Mr. A. C. Daniel.

The following are the public bodies to which the Chamber has the right of returning representatives, and the representatives returned for the current year :—

*Viceroy's Legislative Council.*—The Hon'ble Sir F. H. Stewart, Kt., C.I.E.

*Bengal Legislative Council.*—The Vice-President of the Chamber and the Hon'ble Mr. Archy Birkmyre.

*Calcutta Port Commission.*—The Hon. Mr. J. Mackenzie (Macmillan & Co.), Messrs. W. E. Crum (Graham & Co.), D. Carmichael (Mackinnon, Mackenzie & Co.), A. C. Patterson (Becker, Gray & Co.), the Hon. Mr. E. H. Bray (Gillanders, Arbuthnot & Co.), Hon. Sir F. H. Stewart, Kt., C.I.E. (Gladstone, Wyllie & Co.).

*Calcutta Municipal Corporation.*—The Hon. Mr. E. H. Bray (Gillanders, Arbuthnot & Co.), Messrs. T. R. Pratt, W. R. Rae (Sun Insurance Office), and Shirley Trehearne (W. H. Targett & Co.).

*Bengal Boiler Commission.*—Messrs. C. L. Thomson (Barnagore Jute Factory Co., Ltd.), H. H. Reynolds, M.I.C.E. (Bengal Coal Co., Ltd.), and T. Wilson (Jessop & Co., Ltd.).

*Board of Trustees of the Indian Museum.*—Mr. J. B. Lloyd (Shaw, Wallace & Co.)

**Bengal Smoke Nuisances Commission**—Messrs. A. Cochran (Burn & Co., Ltd.) and W. Lamond (Union Jute Co., Ltd.)

**Calcutta Improvement Trust**—Mr. W. K. Dods (Agent, Hongkong and Shanghai Banking Corporation).

The Chamber elects representatives to various other bodies of less importance, such as the committee of the Calcutta Sailors' Home, and to numerous subsidiary associations. The following are the recognised associations of the Bengal Chamber of Commerce:—

Calcutta Wheat and Seed Trade Association, Indian Jute Mills' Association, Indian Tea Association, Calcutta Tea Traders' Association, Calcutta Fire Insurance Agents' Association, Calcutta Import Trade Association, Calcutta Marine Insurance Agents' Association, The Wine, Spirit and Beer Association of India, Indian Mining Association, Calcutta Baled Jute Association, Indian Paper Makers' Association, Indian Engineering Association, Jute Fabrics Shippers' Association, Calcutta Hydraulic Press Association, Jute Fabric Brokers' Association, Baled Jute Shippers' Association, European Jute Dealers' Association and Calcutta Liners' Conference.

The Chamber maintains a tribunal of arbitration for the determination, settlement and adjustment of disputes and differences relating

to trade, business, manufactures, and to customs of trade, between parties, all or any of whom reside or carry on business personally or by agent or otherwise in Calcutta, or elsewhere in India or Burmah, by whomsoever of such parties the said disputes and differences be submitted. The Secretary of the Chamber acts as the Registrar of the Tribunal, which consists of such members or assistants to members as may, from time to time, annually or otherwise be selected by the Registrar and willing to serve on the Tribunal. The Registrar from time to time makes a list of such members and assistants.

The Chamber also maintains a Licensed Measurers Department controlled by a special committee. It includes a Superintendent (Mr. Jas. Knox), Deputy Superintendent (Mr. A. H. Lugg) and three Assistant Superintendents and the staff at the time of the last official returns consisted of 140 officers. The usual system of work for the benefit of the trade of the port is followed. The Department has its own provident fund and compassionate fund and Measurers' Club. The Chamber does not assist in the preparation of official statistical returns. It publishes weekly the *Calcutta Prices Current* and its Monthly Supplement and also publishes a large number of statistical circulars of various descriptions in addition to a monthly abstract of proceedings and many other circulars on matters under discussion.

## BOMBAY.

The object and duties of the Bombay Chamber, as set forth in their rules and regulations, are to encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the general mercantile interests of this Presidency; to collect and classify information on all matters of general commercial interest; to obtain the removal, as far as such a Society can, of all acknowledged grievances affecting merchants as a body, or mercantile interests in general; to receive and decide references on matters of usage and custom in dispute, recording such decisions for future guidance, and by this and such other means, as the Committee for the time being may think fit, assisting to form a code of practice for simplifying and facilitating business; to communicate with the public authorities, with similar Associations in other places and with individuals, on all subjects of general mercantile interests; and to arbitrate between parties willing to refer to, and abide by, the judgment of the Chamber.

The Bombay Chamber was established in 1836, under the auspices of Sir Robert Grant, who was then Governor of the Presidency, and the programme described above was embodied in their first set of rules. There are now affiliated with the Chamber the Bombay Millowners' Association, which exists to carry out the same general objects as the Chamber in the special interests of "millowners and users of steam and water power," and the Bombay Cotton Trade Association, which similarly exists for the special benefit of persons engaged in the cotton trade. According to the latest

returns, the number of members of the Chamber is 124. Of these 16 represent banking institutions, 6 shipping agencies and companies, 3 firms of solicitors, 3 railway companies, 4 insurance companies, 8 engineers and contractors, 84 firms engaged in general mercantile business.

All persons engaged or interested in mercantile pursuits desirous of joining the Chamber and disposed to aid in carrying its objects into effect are eligible to election to membership by ballot. The member's subscription is Rs. 15 per month and an additional charge of Rs. 200 per annum is made to firms as subscription to the trade returns published by the Chamber. Gentlemen distinguished for public services, or "eminent in commerce and manufactures," may be elected honorary members and as such are exempt from paying subscriptions. Any stranger engaged or interested in mercantile pursuits and visiting the Presidency may be introduced as a visitor by any Member of the Chamber inserting his name in a book to be kept for the purpose, but a residence of two months shall subject him to the rule for the admission of members.

### Officers of the Year.

The affairs and funds of the Chamber are managed by a committee of nine ordinary members, consisting of the chairman and deputy-chairman and seven members. The committee must, as a rule, meet at least once a week and the minutes of its proceedings are open to inspection by all members of the Chamber, subject to such regulations as the committee may make in regard to the matter.

A general meeting of the Chamber must be held once a year and ten or more members may requisition, through the officers of the Chamber, a special meeting at any time, for a specific purpose.

The Chamber elects representatives as follows to various public bodies:—

**Legislative Council of the Governor-General,** one representative. The Chamber may elect anyone, but in practice they have hitherto returned their chairman.

**Legislative Council of the Governor of Bombay,** one representative, who may also be anyone, but is, in practice, always the deputy chairman.

**Bombay Municipal Corporation,** two members, elected for three years.

**Board of Trustees for the Improvement of the City of Bombay,** one member, elected for two years.

**Board of Trustees of the Port of Bombay,** five members, two and three being elected in alternate years.

Representatives on the Legislative Councils become ex-officio members of the committee of the Chamber, during their terms of office, if they are not already members.

The following are the officers of the Chamber for the year 1916-17 and their representatives on the various public bodies:—

**Chairman:** The Hon'ble M. J. S. Wardlaw Milne (Turner Morrison & Co., Ltd.)

**Deputy Chairman:** The Hon'ble Mr. Malcolm N. Hogg (Forbes, Forbes, Campbell & Co., Ltd.)

**Committee:** Messrs. G. H. Bowman (Lyon Lord & Co., Ltd.), J. H. Fyfe (Mackinnon Mackenzie & Co.), S. J. Gillum (The Bombay Co., Ltd.), H. P. Hebblethwaite (Killick Nixon & Co.), Geo. Miller (Chartered Bank of India, Australia and China), Nigel F. Paton (W. & A. Graham & Co.), R. Woolcombe (B. B. & C. I. Ry.).

**Secretary:** Mr. R. E. Gregor-Pearse.

**Assistant Secretary:** Mr. Noel Wilkinson, B.A.

**Representatives on—**

**Viceroy's Legislative Council:** The Chairman.

**Bombay Legislative Council:** The Deputy Chairman.

**Bombay Improvement Trust:** Mr. A. M. Tod.

**Bombay Port Trust:** The Chairman, the Deputy Chairman, Mr. Nigel F. Paton, Mr. A. H. Froom, Mr. T. W. Birkett.

**Bombay Municipality:** Messrs. A. M. Tod (British Dominions General Insurance Co., Ltd.) and Harry T. Gorrice (South British Insurance Co., Ltd.).

**Advisory Board of Sydenham College of Commerce and Economics:** Messrs. W. A. Haig Brown and J. S. Wardlaw Milne.

**Bombay Smoke Nuisances Commission:** The Hon. Mr. Malcolm N. Hogg.

**St. George's Hospital Advisory Committee:** Sir Stanley Reed, Kt., LL.D.

### Special Work.

One of the most important functions performed by the Chamber is that of arbitration in commercial disputes. Rules for this have been in existence for many years and have worked most satisfactorily. The decisions

are in all cases given by competent arbitrators appointed by the General Committee of the Chamber and the system avoids the great expense of resort to the Law Courts.

A special department of the Bombay Chamber is its Statistical Department, which prepares a large amount of statistical returns connected with the trade of the port and of great importance to the conduct of commerce. The department consists of eleven Indian clerks who, by the authority of Government work in the Customs House and have every facility placed at their disposal by the Customs authorities. They compile all the statistical information in connection with the trade of the port, in both export and import divisions, which it is desirable to record. No other Chamber in India does similar work.

The Bombay Chamber publishes a Daily Arrival Return which shows the receipts into Bombay of cotton, wheat and seeds, and Daily Trade Return, which deals with trade by sea and shows in great detail imports of various kinds of merchandise and of treasure while the same return contains particulars of the movements of merchant vessels.

The Chamber publishes twice a week detailed reports known as Import and Export manifests, which give particulars of the cargo carried by each steamer to and from Bombay.

Three statements are issued once a month. One shows the quantity of exports of cotton, seeds and wheat from the principal ports of the whole of India. The second gives in detail imports from Europe, more particularly in regard to grey cloths, bleached cloths, Turkey red and scarlet cloths, printed and dyed goods, fancy cloth of various descriptions, woollens, yarns, metals, kerosene oil, coal, aniline dyes, sugar, matches, wines and other sundry goods. The third statement is headed, "Movements of Piece Goods and Yarn by Rail," and shows the despatches of imported and local manufactured piece-goods and yarn from Bombay to other centres of trade served by the railways.

The "Weekly Return" issued by the Chamber shows clearances of a large number of important descriptions of merchandise. A return of "Current Quotations" is issued once a week, on the day of the departure of the English mail, and shows the rates of exchange for Bank and Mercantile Bills on England and Paris, and a large quantity of general banking and trade information.

The annual reports of the Chamber are substantial tomes in which the whole of the affairs of the Chamber and the trade of the port during the past year are reviewed.

The Chamber has also a Measurement Department with a staff of twelve, whose business is that of actual measurement of exports in the docks before loading in steamers. Certificates are issued by these officers with the authority of the Chamber to shippers and ship agents as to the measurement of cotton and other goods in bales or packages. The measurers are in attendance on the quays whenever there are goods to be measured and during the busy season are on duty early and late. The certi-

Boats granted show the following details:—

- (a) the date, hour and place of measurement;
- (b) the name of the shipper;
- (c) the name of the vessel;
- (d) the port of destination;
- (e) the number and description of packages;
- (f) the marks;
- (g) the measurement; and, in the case of goods shipped by boats,
- (A) the registered number of the boat;
- (i) the name of the tindal.

### Bombay Millowners' Association.

The Bombay Millowners' Association was established in 1875 and its objects are as follows:—

- (a) The protection of the interests of millowners and users of steam, water and/or electric power in India;
- (b) The promotion of good relations between the persons and bodies using such power;
- (c) The doing of all those acts and things by which these objects may be furthered.

Any individual partnership or company, owning one or more mill or mills or one or more press or presses or one or more ginning or other factory or factories actuated by steam, water, electric and/or other power is eligible for membership, members being elected by ballot. Every member is entitled to one vote for every complete sum of Rs. 50 paid by him as annual subscription.

The membership of the Association in 1916 numbered 110.

The following is the Committee for 1916:—

Mr. N. B. Saklatwalla (*Chairman*), the Hon'ble Mr. D. E. Wacha (*Deputy Chairman*), Sir Sassoon David, Bart., the Hon'ble Sir Dinshaw M. Petit, Bart., the Hon'ble Sir Fazulbhoj Currimbhoy, Kt., Sir Vithaldas D. Thackersey, Kt., Mr. T. R. Aldred, the Hon'ble Mr. Mannohundas Ramji, Mr. E. Brown, Mr. Rahimtoola Currimbhoy Ebrahim, Mr. Narottam M. Goculdas, Mr. N. G. Hunt, Mr. Cowasjee Jehangir (Jun.), Mr. J. Knowles, Mr. J. H. Latimer, The Hon'ble Mr. C. V. Mehta, Mr. Meyer Niasim, Mr. Jehangir B Petit, Mr. C. N. Wadia, Mr. N. N. Wadia.

Mr. R. E. Gregor-Pearse, *Secretary*.

Mr. Noel-Wilkinson, B.A., *Asst. Secretary*.

The following are the Association's Representatives on public bodies:—

*City of Bombay Improvement Trust*: Sir Sassoon David, Bart.

*Victoria Jubilee Technical Institute*: Mr. Jehangir Bomanjee Petit.

*Bombay Smoke Nuisance Commission*: Messrs. N. N. Wadia and W. A. Sutherland.

*Advisory Board of Sydenham College of Commerce and Economics*: Mr. N. N. Wadia.

### Indian Merchants' Chamber.

The Bombay Indian Merchants' Chamber and Bureau was established in 1907 with the following objects:—“To encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the trade, commerce

and manufactures of India and in particular to promote the general commercial interests of the Presidency of Bombay; to consider and deliberate on all questions affecting the rights of Indian Merchants, to represent to the Government their grievances, if any, and to obtain by constitutional methods the removal of such grievances; to collect and compile and distribute in such manner as may be most expedient for purposes of disseminating commercial and economic knowledge, all statistics and other information relating to trade, commerce and finance, specially Indian: as well as to form and maintain a library, and generally to do all such matters as may promote the above objects in view; to arbitrate between parties willing to refer to and abide by the judgment of the Chamber; to receive and decide references of matters of usage and custom in dispute, recording such decisions for future guidance and assisting by this and such other means, as the committee for the time being may think fit, to form a code of practice so as to simplify and facilitate the transaction of business.”

The Chamber has not yet taken up the work of arbitration, measurements, etc.

The following bodies are connected directly and indirectly with the Chamber, though no public body is directly affiliated to it:—

The Bombay Native Piece-goods Merchants' Association (which sends a large number of representatives);

The Grain Merchants' Association (which is a member);

The Hindustani Native Merchants' Association (which is a member);

The Bombay Country Tobacco Trade Association;

The Bombay Rice Merchants' Association;

The Bombay Fancy Piece-goods Association;

The Bombay Yarn, Copper and Brass Native Merchants' Association.

The Chamber elects a representative jointly with the Bombay Native Piece-goods Merchants' Association to the Bombay Legislative Council and a representative to the Board of Trustees for the Port of Bombay, whenever it is so notified by the Government (*vide Act No. 1 of 1909*). The Chamber also has the right to elect a representative on the Board of the Sydenham College of Commerce and Economics, Bombay.

Any person engaged in mercantile pursuits or interested in trade and commerce desirous of joining the Chamber is eligible for membership, there being two classes of members, viz., Ordinary and Honorary. Ordinary members shall be (1) Resident members who pay Rs. 80 annual fee, except that if an Association joins as a member it will have to pay an annual fee of Rs. 100, and (2) *Mofussil* members who pay Rs. 5 as annual fee. An ordinary member also pays an entrance fee of Rs. 50 on being elected.

Gentlemen distinguished for public services or eminent in commerce and manufactures or otherwise interested in the aims and objects of the Chamber may be elected as Honorary members by a General Meeting of the Chamber on the recommendation of the Committee and as such are exempted from paying subscriptions. They are not entitled to vote at

any meeting of the Chamber nor are they eligible to serve on the Committee. They are, however, supplied with all the publications of the Chamber free of charge.

The following are the Officers of the Chamber for the year 1916-17.—

**Chairman.**—The Hon'ble Mr. Lallubhai Samaldas, C.I.E.

**Vice-Chairman.**—Sir Vithaldas Damodar Thackersey.

**Committee.**—The Hon'ble Mr. Purshottamdas Thakordas, Hon'ble Mr. Dinshah Edulji Wacha, Hon'ble Mr. Manmohandas Ramji, Hon'ble Sir Fazulbhoy Currimbhoy Ibrahim, Hon'ble Sir Ibrahim Rahimulla, Sir Shapurji B. Barucha, Mr. Devidas Madhooji Thackersey, the Hon'ble Mr. Chunilal V. Mehta, Messrs. Jethabhai Walji, Ravashanker Jagjiwan, Motilal Vallabhji, Gopalji Valji Sunderji, Motilal Kanji, Chaturbhuj Shrivji, Phiroz J. Dillimoria Naranji Haribhai, Mulji Haridas, Mathurdas Vasanji Khimji, Ratansey Mulji, Sorabji Edulji Warden, Morarji Velji, S. B. Billimoria, M. P. Madan, Laxmichand Maneckchand Khokhani (The Bombay Shroff Association), Jagan-nathji, Munim of Seth Tarachand Juharmal (The Hindustan Native Merchants' Association), and Currimbhoy Lalji Sajan (The Rice Merchants' Association).

The following are the Chambers' representatives on various public bodies:—

**Bombay Legislative Council.**—The Hon. Mr. Manmohandas Ramji.

**Bombay Port Trust.**—The Hon. Mr. Manmohandas Ramji.

**Advisory Board of the Sydenham College of Commerce.**—Mr. D. E. Wacha.

**Industrial Advisory Board of the Government of Bombay.**—The Hon. Sir Fazulbhoy Currimbhoy and the Hon. Sir Manmohandas Ramji.

The staff of the Chamber include:—

**Secretary.**—Mr. J. K. Mehta, M.A.

**Assistant Secretary.**—Mr. M. M. Munshi, B.A.

**Hon. Auditor.**—Mr. Ardeshir Edulji Cama, C.A. (A. C. Rice & Co.)

**Solicitors.**—Messrs. Edgell, Gulabchand, Wadia & Co.

The Chamber publishes every month a journal in Gujarati giving information on commercial and industrial subjects and publishing all statistics considered important relating to the trade and commerce of India.

### Cotton Trade Association.

The Bombay Cotton Trade Association, Limited, was founded in 1876. The objects for which it was established were, *inter alia*, "to adjust disputes between persons engaged in the cotton trade, to establish just and equitable principles in the trade to maintain uniformity to rules, regulations and usages in the trade, to adopt standards of classification in the trade, to

acquire, preserve and disseminate useful information connected with the cotton interests throughout all markets and generally to promote the cotton trade of the City of Bombay and India and augment the facilities with which it may be conducted." The Association had in 1915-16 50 shareholders and 136 associate members. Its affairs are managed by a Board of Directors, consisting of eight members, who are now as follow:—

**Chairman.**—Mr. T. D. Moore (New Mofussil Co. Ltd.)

**Deputy Chairman.**—Mr. Osborne Marshall, (Dreman & Co.)

**Members.**—Messrs. C. W. du Breul (Breul & Co.), H. F. Bush (Bombay Co., Ltd.), H. R. Greaves (Greaves Cotton & Co.), K. Kusumoto (Japan Cotton Trading Co., Ltd.), B. C. Reade (Gill & Co.), C. H. Roberts (Priede Saone & Co.), the Hon'ble Mr. Purshottamdas Thakordas (Narandas Rajaram & Co.).

**Secretary.**—Mr. R. E. Gregor-Pearse.

### Native Piece-Goods Association.

The objects of the Association are as follow:—

(a) To promote by creating friendly feelings and unity amongst the Merchants, the business of the piece-goods trade in general at Bombay, and to protect the interest thereof; (b) to remove, as far as it will be within the powers of the Association to do so, all the trade difficulties of the piece-goods business and to frame such line of conduct as will facilitate the trade; (c) to collect and assort statistics relating to piece-goods and to correspond with public bodies on matters affecting trade, and which may be deemed advisable for the protection and advancement of objects of the Association or any of them; and (d) to hear and decide disputes that may be referred to for arbitration.

The following are the office-bearers for the current year.—

**Chairman.**—The Hon. Mr. Manmohandas Ramji.

**Deputy Chairman.**—Mr. Gopalji Valji Sunderji.

**Hon. Joint Secretaries.**—Messrs. Purshotam Kanji and Vithaldas Damodar Govindji.

**Hon. Treasurer.**—Mr. Mathuradas Haridas.

### Grain Merchants' Association.

The object of this body is "to promote the interests of the merchants and to put the grain and seeds trade on a sound footing." It is an influential body of large membership. The office holders for the current year are as follow:—

**Chairman.**—Mr. Hirji Mulji, of Messrs. Dharsi, Nanji & Co.

**Vice-Chairman.**—Mr. Velji Lakhamsi, B.A., LL.B.

**Hon. Secretary.**—Mr. Shamji Shivji.

**Secretary.**—Mr. Lalshanker Harprasad.

## KARACHI.

The objects and duties of the Karachi Chamber are set forth in terms similar to those of Bombay. Qualifications for membership are also similar. Honorary membership is conferred upon "any gentlemen interested in the affairs and objects of the Chamber", subject to election by the majority of the votes of mem-

bers. All new members joining the Chamber pay Rs. 100 entrance fee and the monthly subscriptions is Rs. 6 for any member contributing Rs. 600 to the Chamber Fund, in addition to entrance fee, and Rs. 12 without such contribution. The subscription for the Chamber's periodical returns is Rs. 5 per month. The affairs



of the Chamber are managed by a committee of ten members, consisting of a Chairman, Vice-Chairman and eight members, elected at the annual meeting of the Chamber in January or immediately after. The Chamber elects a representative on the Bombay Legislative Council and three representatives on the Karachi Port Trust. There were last year 54 members of the Chamber, and 7 Honorary Members.

The following are the officers of the Chamber for the current year:—

**Chairman.**—The Hon'ble Mr. W. U. Nicholas (Anderson & Co.).

**Vice-Chairman.**—Mr J. I. Murray (Ewart, Hysie & Co.).

**Managing Committee.**—Messrs. B. F. Jones (Forbes, Forbes, Campbell & Co., Ltd.), J. M. Lang (Bombay Company, Ltd.), E. A. Miller (Macdonald & Co.), H. F. Pfister (Ralli Brothers), T. J. Stephen (National Bank of India, Ltd.), J. B. Stevenson (Donald Graham & Co.), D. B. Trevor (North Western Railway), and S. C. Woodward (Clements, Robson & Co.).

**Representative on the Bombay Legislative Council.**—The Hon. Mr. W. U. Nicholas.

**Representative on the Karachi Port Trust.**—Mr. J. I. Murray, Mr. E. A. Pearson and Mr. S. C. Woodward.

**Secretary.**—Mr. E. L. Rogers.

**Public Mesurer.**—Captain S. Mylcrist.

The following are the principal ways in which the Chamber gives a special assistance to members. The Committee take into consideration and give an opinion upon questions submitted by members regarding the custom of the trade or of the Port of Karachi. The Committee undertake to nominate European surveyors for the settlements of disputes "as to the quality or condition of merchandise as to the quality in which both parties desire the Chamber to do so." When two members of the Chamber or when one member and a party who is not a member have agreed to refer disputes to the arbitration of the Chamber or of an arbitrator or arbitrators nominated by the Chamber, the Committee will undertake to nominate an arbitrator or arbitrators, under certain regulations. A public mesurer is appointed under the authority of the Chamber to measure pressed bales of cotton, wool hemp, hides and other merchandise in Karachi.

## MADRAS.

The Madras Chamber of Commerce was founded in 1886. All merchants and other persons engaged or interested in the general trade, commerce and manufactures of Madras are eligible for membership. Any assistant signing a firm or signing *per pro* for a firm is eligible. Members who are absent from Madras but pay their subscriptions may be represented in the Chamber by their powers-of-attorney, as honorary members, subject to ballot. Honorary members thus elected are entitled to the full privilege of ordinary members. Election for membership is by ballot at a general meeting, a majority of two-thirds of the recorded votes being necessary to secure election. Every member pays an entrance fee of Rs. 100, provided that banks, corporate bodies and mercantile firms may be represented on the Chamber by one or more members and are liable for an entrance fee of Rs. 100 once in ten years each. The subscription shall not exceed Rs. 160 per annum, payable quarterly in advance, subject to reduction from time to time in accordance with the state of the Chamber's finances. Absentees in Europe pay no subscription and members temporarily absent from Madras pay one rupee per month. Honorary members are admissible to the Chamber on the usual conditions. Members becoming insolvent cease to be members but are eligible for re-election without repayment of the entrance donation.

The Chamber undertakes arbitrations and surveys, the granting of certificates of origin and the registration of trade marks. One of the rules for the last named is "that no trade mark on ticket shall be registered on behalf of an Indian firm trading under a European name."

The following publications are issued by the Chamber:—**Madras Price Current and Market Report, Tonnage Schedule and Madras Landing Charges and Harbour Dues Schedule.**

There are 40 members and five honorary members of the Chamber in the current year and the officers and committee for the year are as follows:—

**Chairman.**—The Hon'ble Mr. Gordon Fraser.  
**Vice-Chairman.**—Sir Bernard Hunter.

**Committee.**—Mr. A. J. Leech, Mr. H. P. M. Rae, Mr. A. P. Symonds, Mr. F. E. L. Worke, Mr. F. B. Wathen.

**Acting Secretary.**—Mr. T. E. Welby.

The following are bodies to which the Chamber are entitled to elect representatives, and the representatives elected for the year:—

**Madras Legislative Council.**—The Hon'ble Mr. Gordon Fraser.

**Madras Port Trust.**—The Hon'ble Mr. Gordon Fraser (Messrs. Best & Co., Ltd.), Mr. H. P. M. Rae (The Bombay Co., Ltd.), Mr. J. F. Simpson (Messrs. Gordon Woodroffe & Co.), Mr. R. Todd (Madras & Southern Mahratta Railway Co., Ltd.), the Hon'ble Mr. A. Muirhead, C.I.E. (The South Indian Railway Co., Ltd.), Mr. J. H. Thonger (Madras Trades' Association).

**Madras Municipal Corporation.**—Mr. A. J. Leech (Messrs. T. A. Taylor & Co.), Mr. A. P. Symonds (Messrs. Binny & Co. Ltd.), Mr. J. F. Simpson (Messrs. Gordon Woodroffe & Co.).

**British Imperial Council of Commerce, London.**—Mr. A. J. Yorke (in Europe).

**Indian Tea Cess Committee.**—Mr. C. E. Wood (Perry & Co.).

## Southern India Chamber.

The Southern India Chamber of Commerce has its Registered Office in Madras. The objects of the Chamber are those usual for such bodies, concerning the promotion of trade, especially in the Madras Presidency, and the interests of members. Special objects are stated to be:—

"To maintain a Library of books and publications of commercial interest, so as to diffuse commercial information and knowledge amongst its members.

"To establish Museums of commercial products or organise exhibitions, either on behalf of the Chamber or in co-operation with others."

There are two classes of members, permanent and honorary. The usual conditions as to eligibility for election prevail.

The Tuticorin Merchants Association is affiliated to the Chamber. The right of electing two representatives to the Madras Port Trust was accorded to the Chamber by the Madras

Port Trust Amendment Act, 1915. Members of the Chamber hold seats in the Madras Legislative Council and in the Madras Corporation, but the Chamber does not enjoy the right of electing representatives to these bodies.

*President*.—Rao Bahadur P. Theagaraya Chettiar, B.A.

*Vice-Presidents*.—Khan Bahadur M. A. Kuddus Badsha Sahib and Dewan Bahadur Govindoss Chathurbhoojaddoss.

*Honorary Secretaries*.—M. R. Ry. Rao Sahib G. Soobbiah Chetti and Moulana Abdus Subhan Sahib.

*Asst. Secretary*.—C. Duraiswami Aiyangar, B.A.

## UPPER INDIA CHAMBER.

The Upper India Chamber of Commerce is concerned with trade, commerce and manufactures in the United Provinces and has its registered office at Cawnpore. Members are elected by the Committee, subject to confirmation by the next general meeting of the Chamber. Honorary members are elected on the usual qualifications, but can neither serve in the Committee nor vote at meetings of the Chamber. There is no entrance fee for membership, but subscriptions are payable as follows:—A firm, company or association having its place of business in Cawnpore, Rs. 200 a year; An individual member resident or carrying on business in Cawnpore, Rs. 100; Firms or individuals having their places of business or residence outside Cawnpore pay half the above rates, but the maintenance of a branch office in Cawnpore necessitates payment of full rates.

The affairs and funds of the Chamber are managed by a Committee of ten members, which has power to constitute Local Committees, of from four to seven members each, at trade centres where membership is sufficiently numerous to justify the step. Such Local

Committees have power to communicate only with the Central Committee.

The Chamber appoints arbitration Tribunals for the settlement and adjustment of disputes when invited to do so, members of the Tribunals being selected from a regular printed list of arbitrators.

The Chamber has in the present year 62 members, four honorary members and five affiliated members.

The following are the officers:—

*President*.—The Hon. Mr. J. P. Watson (Cooper, Allen & Co., Ltd.)

*Vice-President*.—Mr. T. D. Eldicston (Begg Sutherland & Co)

*Members*.—Messrs. N. K. Grey, (Allahabad Bank, Ltd.), N. A. S. Bond (E. I. Ry.), C. O'Malley (Cawnpore Cotton Mill), A. B. Shakespear, C.I.E. (Cawnpore Sugar Works, Ltd.), T. Gavin Jones, (Empire Engineering Co.), A. W. Lilley (Cawnpore Woollen Mill), W. G. Connor (Allen Bros & Co., Ltd.), Babu Ram Narain (Budjidass Ram Narain).

*Secretary*.—Mr. J. G. Ryan,

## PUNJAB.

The Punjab Chamber of Commerce has its headquarters at Delhi and exists for the care of mercantile interests on the usual lines in the Punjab, the North-West Frontier Province and Kashmir. There are affiliated branches of the Chamber at Lahore and Amritsar. Members are elected by ballot, the only necessary qualification being interest in mercantile pursuits. There is no entrance fee. The rate of subscription is Rs. 10 per month. The Chamber returns one member to a seat on the Municipal Corporation, Delhi, and the present representative is Mr. J. C. Roberts.

The following are the Officers, Committee and Representatives on public bodies for the current year:—

*President*.—The Hon'ble Mr. James Currie (Messrs. James Currie & Co.)

*Vice-President*.—Mr. W. Angelo (The Delhi and London Bank, Ltd.),

*Committee*.—Mr. C. R. Goodwin (The Ganesh Flour Mills Co., Ltd.), Mr. N. A. S. Bond (The East Indian Railway), Mr. D. N. Bhanja (Messrs. Kerr, Tarruck & Co.), Mr. R. Macpherson (The Chartered Bank of India, Australia and China), Mr. J. Dale Green (The North Western Railway), Mr. J. C. Roberts (Messrs. Gutmann & Co.).

*Representative on Punjab Legislative Council*.—The Hon'ble Mr. James Currie.

*Representative on Delhi Municipal Committee*.—Mr. J. C. Roberts (Messrs. Gutmann & Co.).

*Secretary*.—Mr. J. Rentor Denning, F.R.S.A.

The Chamber is affiliated with the British Imperial Council of Commerce, London, and is represented in England by Sir James Walker, Alliance Bank of India, and Mr. H. G. C. Aimers, National Bank of India, Ltd., London.

## UNITED PROVINCES.

A meeting of Indians engaged or interested in the trade and industry of the United Provinces was held at Cawnpore in February 1914 to inaugurate an Indian Chamber for the United Provinces. Representatives of firms in Cawnpore, Benares, Allahabad, Lucknow, Fyzabad and other places were present. It was unanimously resolved to establish a United Provinces Chamber of Commerce with its headquarters at Cawnpore. The Chamber has been registered under the Indian Companies Act and has been recognised by the Provincial Government, which has granted the privilege of nominating two members of the Chamber to the Cawnpore Municipal Board. The total number of members of the Chamber is 64.

The following are the office holders of the Chamber appointed in 1916:

*President*—Rai Bahadur Lala Bishambhar Nath (Cawnpore).

*Vice Presidents*—The Hon'ble B. Motichand (Benares), Mr. B. Alakh Dhari (Meerut), and Lala Mamman Lal (Cawnpore).

*Committee*—Rai Bahadur Munshi Prag Narain Bhargava (Lucknow), The Hon'ble Mr. C. Y. Chintamani (Allahabad), Rai Bahadur B. Kanhja Lal (Cawnpore), Seth Ram Gopal (Cawnpore), Lala Dina Nath (Cawnpore), B. Behari Lal (Cawnpore), Hafiz Mohammad Hallim (Cawnpore), Mr. B. N. Sen (Cawnpore), and The Punjab National Bank, Ltd. (Cawnpore).

*Secretary and Joint Secretary*—B. Vikramajit (Cawnpore) and Pt. Bishwa Nath Tholal Singh (Cawnpore).

## BURMA.

The Burma Chamber of Commerce, with headquarters at Rangoon, exists to encourage friendly feeling and unanimity among commercial men on all subjects involving their common good, to promote and protect trade, commerce and manufactures and, in particular, the general mercantile interest of the province, to communicate with public authorities, associations and individuals on all matters, directly or indirectly affecting these interests, and to provide for arbitration between parties willing to refer to, and abide by, the judgment of arbitrators appointed by the Chamber. The following are affiliated bodies:—

Burma Fire Insurance Association,

Burma Marine Insurance Agents' Association,

Rangoon Import Association.

The Chamber elects representatives to the following Public Bodies:—

Burma Legislative Council.

Rangoon Port Trust Board.

Rangoon Municipal Committee.

Victoria Memorial Park Trustees.

Pasteur Institute Committee.

Burma Boiler Commission.

All corporations, companies, firms or persons engaged or interested in mercantile pursuits, such as merchants, bankers, shipowners and brokers or who are connected with agriculture, mining, manufactures, insurance, railways, commerce, art, science or literature shall be eligible to become Members of the Chamber. The subscription is Rs. 20 per month. Officials and others indirectly connected with the trade of the province, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected by the Committee, either on their own motion or on the

suggestion of two Members as Honorary Members of the Chamber. Honorary Members are not required to subscribe to the funds of the Chamber.

The Chamber undertakes arbitrations in addition to its ordinary work. It does not publish any statistical returns.

The following are the Officers, Committee and Representatives on public bodies for the current year:—

*Chairman*—The Hon. Mr. W. Macdonald (Harperlink, Smith & Co.).

*Vice-Chairman*—Mr. J. Scott. (Steel Bros. & Co., Ltd.).

*Committee*—Messrs. W. Buchanan (Finlay Fleming & Co.), B. E. G. Eddis (Gillanders, Arbuthnot & Co.), E. G. Johnston (Bombay-Burma Trading Company, Ltd.); H. B. Huddleston (Burma Railways), M. Joakim (Bathazar & Son), A. R. Finlay (J. A. Begbie & Co.), D. Robertson (The Arracan Co., Ltd.), R. G. Nicoll (Mercantile Bank of India, Ltd.).

*Secretary*—Mr. C. A. Cuttriss.

*Representative on the Burma Legislative Council*—The Hon'ble Mr. W. Macdonald.

*Representatives on the Rangoon Port Trust Board*—Messrs. D. Robertson, W. Buchanan, J. A. Polson (on leave), J. C. Mackendrick (acting), J. Scott.

*Representative on the Rangoon Municipal Committee*—Mr. M. Joakim.

*Victoria Memorial Park Trustee*—The Hon'ble Mr. W. Macdonald.

*Pasteur Institute Committee*—The Hon'ble Mr. W. Macdonald.

*Burma Boiler Commission*—Mr. H. H. Gallie (Bullock Bros. & Co., Ltd.).

## COCANADA.

The following are the office-holders of the Cocanada Chamber of Commerce, which has its headquarters at Cocanada, the chief port on the Coromandel Coast, north of Madras:—

Messrs. P. J. Rose (Bank of Madras), *Chairman*; A. Gardiner and B. Eddington (Coromandel Co., Ltd.), E. H. D'Cruz (Wilson & Co.), A. E. Todd (Simson Bros.), M.R.Ry. Rao Bahadur K. Suryanarayanamurty Naidu Garu and G. M. Lake (Innes & Co.), L. C. Parton (Shaw Wallace & Co.), R. J. Hunter (Ripley and Co.), E. Flury (Volkart Bros.), and C. B. Shore (Gordon Woodroffe & Co.).

*Secretary*—Mr. J. A. Muller.

The rules of the Chamber provide "that by the term 'member' be understood a mercantile firm or establishment, or the permanent agency of a mercantile firm or establishment, or a society of merchants carrying on business in Cocanada, or other place in the Districts of Kistna, Godavari, Vizagapatam, and Ganjam, and duly electing according to the Rules of the Chamber, and that all such be eligible, but only members resident in Cocanada can hold office."

Members are elected by ballot. The Committee, when called upon by disputing members or non-members of the Chamber, give their decision upon all questions of mercantile usage and arbitrate upon any commercial matter referred to them for final judgment. In the former case a fee of Rs. 16 and in the latter a fee of Rs. 32 must accompany the reference.

The Committee consist of 4 members, including the Chairman, and 2 supplementary members; the Chairman to be elected by ballot at the general meeting of January in each year, for a term of 12 months; and the Committee, with 2 supplementary members, at the general meetings of January and July in each year, for the term of 6 months. The entrance fee for each member whose place of business is in Cocanada is Rs. 50 and for each member whose place of business is elsewhere be Rs. 25. The subscription for each member whose place of business is in Cocanada is Rs. 120 per annum, and for each member whose place of business is elsewhere be Rs. 60 per annum, payable quarterly in advance.

A weekly slip of current rates of produce freights, and exchange is drawn up by the Committee.

## CEYLON.

The Ceylon Chamber of Commerce was incorporated in 1895 and has its headquarters at Colombo. All firms and persons engaged in the general trade of Ceylon are admissible as members and every person or firm desirous of joining the Chamber must be proposed by one member, seconded by another and ballotted for by the whole Chamber. The affairs of the Chamber are conducted by a Board of Directors consisting of Chairman and Vice-Chairman and from 5 to 10 members.

The following is the membership of this Committee at the present time:—

Mr. Wm. Moir (Lewis Brown & Co.) (*Chairman*), Mr. Jas. Lochore (*Vice-Chairman*), Mr. R. S. Philpott (P. & O. S. N. Co.), Mr. H. S. Jeaffreson, Mr. E. H. Lawrence (National Bank), Mr. W. Phillips, Mr. T. S. Clark, Mr. W. Fraser, Mr. O. S. Burns, Mr. M. J. Cary.

*Secretary*—Mr. F. M. Simpson.

## \* The Peoples of India.

It is essential to bear in mind, when dealing with the people of India, that it is a continent rather than a country. Nowhere is the complex character of Indians more clearly exemplified than in the physical type of its inhabitants. No-one would confuse the main types, such as Gurkhas, Pathans, Sikhs, Rajputs, Burmans, Nagas, Tamils, etc., nor does it take long to carry the differentiation much farther. The typical inhabitants of India—the Dravidians—differ altogether from those of Northern Asia, and more nearly resemble the tribes of Malaya, Sumatra and Madagascar. Whatever may be their origin, it is certain that they have settled in the country for countless ages and that their present physical characteristics have been evolved locally. They have been displaced in the North-West by successive hordes of invaders, including Aryans, Scythians, Pathans and Moghuls, and in the North-East by Mongoloid tribes allied to those of Burma, which is India only in a modern political sense. Between these foreign elements and the pure Dravidians is borderland where the contiguous races have intermingled.

The people of the Indian Empire are divided by Sir Henry Risley (*Caste, Tribe and Race, Indian Census Report, 1901*; the *Gazetteer of India, Ethnology and Caste Volume I, Chapter 6*) into seven main physical types. There would be eight if the Andamanes were included, but this tiny group of Negritos may be disregarded.

**The Turko-Iranian**, represented by the Baloch, Brahui and Afghans of Baluchistan and the North-West Frontier Province. Probably formed by a fusion of Turki and Persian elements, in which the former predominate. Stature above mean; complexion fair; eyes mostly dark, but occasionally grey; hair on face plentiful; head broad; nose moderately narrow, prominent, and very long. The feature in these people that strikes one most prominently is the portentous length of their noses, and it is probably this peculiarity that has given rise to the tradition of the Jewish origin of the Afghans.

**The Indo-Aryan** occupying the Punjab, Rajputana, and Kashmir, and having as its characteristics members the Rajputs, Khattris, and Jats. This type, which is readily distinguishable from the Turko-Iranian, approaches most closely to that ascribed to the traditional Aryan colonists of India. The stature is mostly tall; complexion fair; eyes dark; hair on face plentiful, head long; nose narrow, and prominent, but not specially long.

**The Scytho-Dravidian**, comprising the Maratha Brahmans, the Kunbis, and the Coorgs of Western India. Probably formed by a mixture of Scythian and Dravidian elements. This type is easily distinguished from the Turko-Iranian by a lower stature, a greater length of head, a higher nasal index, a shorter nose, and a lower orbito-nasal index. All of these characters, except perhaps the last, may be due to a varying degree of intermixture with the Dravidians. In the higher groups the amount of crossing seems to have been slight; in the lower the Dravidian elements are more pronounced.

**The Aryo-Dravidian or Hindustani**, found in the United Provinces, in parts of Raj-

putana, and in Bihar and represented in its upper strata by the Hindustani Brahman and in its lower by the Chamar. Probably the result of the intermixture, in varying proportions, of the Indo-Aryan and Dravidian types. The head-form is long with a tendency to medium; the complexion varies from lightish brown to black; the nose ranges from medium to broad, being always broader than among the Indo-Aryans; the stature is lower than in the latter group, and usually below the average according to the scale. The higher representatives of this type approach the Indo-Aryans, while the lower members are in many respects not very far removed from the Dravidians. The type is essentially a mixed one, yet its characteristics are readily definable, and no one would take even an upper class Hindustani for a pure Indo-Aryan or a Chamar for a genuine Dravidian. The distinctive feature of the type, the character which gives the real clue to its origin and stamps the Aryo-Dravidian as racially different from the Indo-Aryan is to be found in the proportions of the nose.

**The Mongolo-Dravidian**, or Bengali type of Lower Bengal and Orissa, comprising the Bengal Brahmans and Kayasthas, the Mahomedans of Eastern Bengal, and other groups peculiar to this part of India. Probably a blend of Dravidian and Mongoloid elements, with a strain of Indo-Aryan blood in the higher groups. The head is broad; complexion dark; hair on face usually plentiful; stature medium; nose medium, with a tendency to broad. This is one of the most distinctive types in India, and its members may be recognised at a glance throughout the wide area where their remarkable aptitude for clerical pursuits has procured them employment. Within its own habitat the type extends to the Himalayas on the north and to Assam on the east, and probably includes the bulk of the population of Orissa; the western limit coincides approximately with the hilly country of Chota Nagpur and Western Bengal.

**The Mongoloid**, type of the Himalayas, Nepal, Assam and Burma, represented by the Kanets of Lahul and Kulu; the Lepchas of Darjeeling and Sikkim; the Limbus, Murnis and Gurungs of Nepal; the Bodo of Assam; and the Burmese. The head is broad; complexion dark, with a yellow tinge; hair on face scanty; stature short or below average; nose tending to broad; face characteristically flat; eyelids often oblique.

**The Dravidian type** extending from Ceylon to the valley of the Ganges, and pervading Madras, Hyderabad, the Central Provinces, most of Central India and Chota Nagpur. Its most characteristic representatives are the Panjyans of Malabar and the Santals of Chota Nagpur. Probably the original type of the population of India, now modified to a varying extent by the admixture of Aryan, Scythian, and Mongoloid elements. In typical specimens the stature is short or below mean; the complexion very dark, approaching black; hair plentiful, with an occasional tendency to curl; eyes dark; head long; nose very broad, sometimes depressed at the root, but not so as to make the face appear

\* The material in this section is almost entirely taken from the Report on the Census of India, 1911, by Mr. E. A. Gait, C.S.I., C.I.E., I.C.S., Fellow of the Royal Statistical Society.

flat. This race, the most primitive of the Indian types, occupies the oldest geological formation in India, the medley of forest-clad ranges, terraced plateau, and undulating plains which stretches roughly speaking, from the Vindhya to Cape Comorin. On the east and the west of the peninsular area the domain of the Dravidian is continuous with the Ghats, while further north it reaches on one side to the Aravallis, and on the other to the Rajmahal Hills. Where the original characteristics have been unchanged by contact with Indo-Aryan or Mongoloid people, the type is remarkably uniform and distinctive. Labour is the birthright of the pure Dravidian whether hoeing tea in Assam, the Duars, or Ceylon, cutting rice in the swamps of Eastern Bengal or doing scavenger's work in the streets of Calcutta, Rangoon and Singapore, he is recognizable at a glance by his black skin, his squat figure, and the negro-like proportions of his nose. In the upper strata of the vast social deposit which is here treated as Dravidian these typical characteristics tend to thin and disappear, but even among them traces of the original stock survive in varying degrees.

It must, however, be clearly understood that the areas occupied by these various types do not admit of being defined as sharply as they must be shown on an ethnographic map. They melt into each other insensibly; and, although at the close of a day's journey from one ethnic tract to another, an observer whose attention had been directed to the subject would realise

clearly enough that the physical characteristics of the people had undergone an appreciable change, he would certainly be unable to say at what particular stage in his progress the transformation had taken place.

**Contrasts.**—The linguistic survey has distinguished in India about a hundred and thirty indigenous dialects belonging to six distinct families of speech. In the domain of religion, though the bulk of the people call themselves Hindus, there are millions of Mahomedans, Animists, Buddhists, Jains, Sikhs, and Christians. So also in respect of social customs. In the north near relatives are forbidden to marry; but in the south cousin marriage is prescribed and even closer alliances are sometimes permitted. As a rule, female chastity is highly valued, but some communities set little store by it, at any rate prior to marriage, and others make it a rule to dedicate one daughter to a life of religious prostitution. In some parts the women move about freely; in others they are kept secluded. In some parts they wear skirts; in others trousers. In some parts again wheat is the staple food; in others rice, and in others millets of various kinds. All stages of civilisation are found in India. At one extreme are the land-holding and professional classes, many of whom are highly educated and refined; at the other various primitive aboriginal tribes, such as the head-hunting Nagas of Assam and the leaf-clad savages of the southern hills who subsist on vernin and jungle products.

## MAIN STATISTICS OF THE INDIAN EMPIRE.

According to the revised areas adopted in the Census of 1911, the Indian Empire contains 1,802,657 square miles, or some 36,000 more than in 1901. About 23,000 square miles have been added owing to the enumeration for the first time of the Agency tracts attached to the North-West Frontier Province. A further 6,500 represent the area of the Sunderbans, or swampy littoral of the Ganges delta, which was left out of account at previous enumerations. Finally the Frontier State of Manipur has been found to contain about 5,000 square miles more than the estimate made in 1901.

**Population Divisions.**—The provinces under British administration comprise 1,093,074 square miles, or 60·6 per cent. of the total. The remainder is included in the Native States. The total population is 315,156,396, of which British territory contains 244,267,542, or 77·5 per cent. and the Native States 70,888,854 or 22·5 per cent.

**Comparisons with Europe.**—These stupendous figures can be grasped only by contrast. The Indian Empire is equal to the whole of Europe, except Russia. Burma is about the same size as Austria-Hungary; Bombay is comparable in point of area with Spain; Madras, the Punjab, Baluchistan, the Central Provinces and Berar and Rajputana are all larger than the British Islands; the United Provinces and Bihar and Orissa than Italy; and Hyderabad and Kashmir than Great Britain excluding Yorkshire.

The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States of America. The United Provinces and Bengal, with the States attached to them, both have as many inhabitants as the British Islands, Bihar and

Orissa as France, Bombay as Austria, and the Punjab as Spain and Portugal combined. The population of the Central Provinces and Berar approaches that of Brazil; Hyderabad and Burma have as many inhabitants as Egypt; Central India and Rajputana as Scotland and Ireland combined; and Assam as Belgium.

**Density.**—In the whole Empire there are on the average 175 persons to the square mile, or much the same as Europe outside Russia. In British territory the number to the square mile is 223 and in the Native States 100; the former figure exceeds by 34 the density ratio in France and the latter is identical with that in Spain.

There are great local variations in density. In nearly two-thirds of the districts, and States, the number of persons to the square mile is less than 200, and in about a quarter it ranges from 200 to 500. The units with less than 100 persons to the square mile covers two-fifths of the total area, but contains only one-eleventh of the population.

**Causes of Density.**—The productiveness of the soil is the main factor in determining the density of the Indian people. The most thickly peopled tracts are the level plains where practically every inch of the land is fit for tillage. This is notably the case in Bengal and Bihar and the United Provinces East. The next most densely peopled tracts are the low-lying plains along the sea coast in the southern part of the peninsula. In the United Provinces West and the Punjab East the configuration of the surface is equally favourable; the rainfall is more scanty and less

regular; but it is supplemented in many parts by water from the canals. The natural divisions which contain the coast districts of Orissa and north Madras, with a rainfall of 50 inches, has a relatively low mean density, but this is because it includes on the west a considerable hilly area, while on the east near the sea the ground is swampy and impregnated with salt. In the intermediate strip, between the littoral and the hills, the density is as great as in parts of the lower Gangetic Plain. Want of water is the main explanation of the comparatively sparse

population in several more or less level tracts such as Gujarat, Rajputana East and Central India West, and the North-West dry area. Assam there are extensive tracts of hill and jun and sandy stretches in the strath of the Brahmaputra River, where permanent cultivation is of question. The agricultural returns show that three-quarters of the whole area is cultivated but this simply means that crops of some kind can occasionally be grown. The proportion of the area fit for permanent cultivation must be less than half that shown in the returns.

## TOWNS AND VILLAGES.

The definition of a town in the Indian census statistics includes every municipality; all Civil Lines not included within municipal limits; every cantonment; every other continuous collection of houses inhabited by not less than 5,000 persons, which may be treated as a town for census purposes. Only 9.5 per cent. of the population of India are found in towns as defined above, compared with 78.1 per cent. in England and Wales and 45.6 per cent. in Germany. Rather more than half the urban population of India is found in towns containing upwards of 20,000 inhabitants, about one-fifth in towns with from ten to twenty thousand, and the same proportion in those with from five to ten thousand; the remainder, about one-fifteenth, live in towns with less than five thousand. The tendency to urban aggregation is most marked in the west of India and least so in the north-east. The proportion of the urban to the total population in the main provinces ranges from 18 per cent. in Bombay to only 3 per cent. in Assam. The urban population of Upper India is much larger than it otherwise would be, because of the numerous old capitals which are found there. In the future the main factors will be the expansion of trade and industrial development.

**Sex in Towns.**—In respect of the distribution by sex, the urban population in India presents a striking contrast to that of European countries. In Europe the proportion of females is larger in towns than in the general population, but in India it is considerably smaller, and the number of females per thousand males is only 847, compared with 953 in the population as a whole. The reason is that in this country the great majority of the domestic servants, shop hands and factory employes are males. The disproportion is most marked in large trading and industrial centres where the number of immigrants is large. In Calcutta, for example, the foreign-born population contains only 357 females per thousand males.

**Religion in Towns.**—Of the Parsis no fewer than six out of every seven are resident in towns; of the Jains, the proportion is nearly one-third; and of the Christians more than one-fifth. There is a marked contrast between these proportions and those for Hindus and Mahomedans who form the bulk of the population. Of the Mahomedans less than one-eighth, and of the Hindus less than one-eleventh, reside in towns. In the case of the former the proportion rises to one-sixth if we exclude the figures for Bengal, where the majority of the Mahomedans are the descendants of local converts. Amongst the Hindus the higher castes have hitherto shown a greater predilection

for town-life than the lower, but the disproportion is gradually disappearing; modern industrial developments are attracting the lower castes to towns in ever-increasing numbers.

**Urban and Rural.**—The proportion of the urban to the total population has fallen during the decade from 9.9 to 9.5 per cent. The main explanation of this is undoubtedly the fact that plague has been far more prevalent in towns than in rural areas. This scourge has now spread to all parts of the Empire except the east and south. At the time of the census an epidemic was raging in many towns, especially in those of the United Provinces, Central India and the Central Provinces and Berar, and a large number of the regular inhabitants had gone away. In addition, however, to driving people away, plague has been responsible in many towns for a terribly heavy mortality. It is impossible to make any estimate of the direct and indirect effects of plague on the growth of towns, but it is quite certain that they have been enormous.

**Urban Tendencies.**—We cannot draw any conclusions as to the tendency to urban aggregation from a comparison of the statistics of the present census with those of the previous one, when plague was still a new and more or less local visitation, but there can be no doubt that there is a growing tendency for people to congregate in towns of a certain kind. The introduction of machinery is rapidly causing the old cottage industries to be replaced by mills and factories; and these are necessarily located at those places where there are the best facilities for collecting the raw material and distributing the manufactured article. The jute industry is practically confined to the banks of the Hooghly near the port of Calcutta. Cotton mills are found chiefly in Western India and woollen and leather factories at Cawnpore and Delhi. The increasing trade of the country and the improvements in railway communications also encourage growth of towns. Not only are the great sea ports attracting an ever-growing population, but various inland towns are benefiting from the same cause. The extent to which modern conditions of trade and industry are causing the growth of towns is obscured not only by plague, which is generally far more prevalent in towns than in rural areas, but also by the decay of old centres of population, which owed their importance to past political and economic conditions. Throughout India there are many former capitals of defunct dynasties whose population is steadily dwindling. During the last ten years, Mandalay, the last capital of the kings of Ava, has lost a quarter of its population.

## GROWTH OF THE INDIAN POPULATION.

	1911.	1931.	1891.	1881.	1872.
<b>INDIA .. .. .</b>	315,156,390	294,361,056	287,314,671	253,896,330	206,162,360
<b>PROVINCES .. .. .</b>	244,267,542	231,605,940	221,240,836	198,882,817	185,163,435
<b>Ajmer-Merwara .. .. .</b>	501,395	476,912	542,358	460,722	396,331
<b>Andamans and Nicobars .. .. .</b>	26,459	24,649	15,609	14,628	....
<b>Assam .. .. .</b>	6,713,635	5,841,878	5,477,302	4,907,702	4,150,769
<b>Baluchistan .. .. .</b>	414,412	382,106	....	....	....
<b>Bengal .. .. .</b>	45,483,077	42,141,477	39,089,632	36,316,728	34,119,465
<b>Bihar and Orissa .. .. .</b>	34,490,084	33,242,783	32,876,557	30,988,320	26,486,482
<b>Bihar .. .. .</b>	23,752,969	23,360,212	23,581,538	22,418,367	19,735,627
<b>Orissa .. .. .</b>	5,131,753	4,982,142	4,666,227	4,343,964	3,603,156
<b>Chota Nagpur .. .. .</b>	5,605,362	4,900,429	4,628,792	4,225,989	3,147,699
<b>Bombay (Presidency) .. .. .</b>	19,672,642	18,559,650	18,878,471	16,494,538	16,301,362
<b>Bombay .. .. .</b>	16,113,042	15,304,766	15,959,292	14,042,621	14,075,508
<b>Sind .. .. .</b>	3,513,435	3,210,910	2,875,100	2,875,100	2,206,565
<b>Aden .. .. .</b>	46,165	43,974	44,079	34,860	19,289
<b>Surma .. .. .</b>	12,115,217	10,490,624	7,722,053	3,736,771	2,747,148
<b>Central Provinces and Berar .. .. .</b>	13,916,308	11,971,452	13,048,972	11,943,363	9,951,268
<b>Central Provinces .. .. .</b>	10,859,146	9,217,436	10,151,481	9,270,690	7,793,614
<b>Berar .. .. .</b>	3,057,162	2,754,016	2,897,491	2,672,673	2,227,654
<b>Coorg .. .. .</b>	174,976	180,607	173,055	178,302	188,512
<b>Madras .. .. .</b>	41,405,404	38,229,654	33,644,428	30,841,154	31,230,622
<b>North-West Frontier Province (Districts and Admin- istered Territories). .. .. .</b>	2,196,933	2,041,534	1,857,519	1,575,943	17,603,672
<b>Punjab .. .. .</b>	19,974,956	20,330,337	19,009,368	17,274,597	17,609,672
<b>United Provinces of Agra and Oudh .. .. .</b>	47,182,044	47,692,277	46,905,512	44,149,959	42,002,004
<b>Agra .. .. .</b>	34,624,040	34,859,109	34,254,568	32,762,127	30,790,961
<b>Oudh .. .. .</b>	12,558,004	12,833,168	12,650,924	11,287,832	11,221,043



## CITIES.

The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. According to this standard there are in India only 30 cities, with a population of 7,076,782, or 2.2 per cent. of the population. Here there is an extraordinary difference between the Indian conditions and those of Western countries. In England the cities contain 45 per cent. of the total population, in Germany 21, and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9.5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India the growth will be more rapid in the future than it has been. The population of cities has risen since 1872 by 64 per cent. and the net increase, comparing like with like, is 43 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 168 per cent. and then Madras and Howrah with 158 and 113 per cent. respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Narpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent.

**Calcutta.**—In speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,04,3807 inhabitants, or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal Government. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24 Parganas (88,000), Hooghly (48,000) and Midnapur (29,000). The volume of immigration is equally great in the suburbs and Howrah.

The first regular census of Calcutta proper taken in 1872 showed a population of 6,33,009. In 1881 there was practically no change, but in 1891 a gain of 11.4 per cent. was recorded. In 1901 there was a further increase of 24.3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5.7

per cent. The falling off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45.3 per cent.

**Bombay.**—which has now a population of 979,445 was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1790, 180,000 in 1814 and 236,000 in 1838. At the first regular census in 1872 it had risen to 644,405, and nineteen years later, in 1891, it was 821,764. In the next decade plague, which first appeared in September 1896, caused a serious set back; and it is estimated that by 1901 this disease had already been responsible for 114,000 deaths. The census of that year showed a decrease of about 6 per cent., but this was not wholly due to deaths. At the time when the census was taken, a virulent epidemic was in progress, and large numbers of the permanent residents had sought safety in flight. A fresh enumeration taken in 1906 by the Health Department of the Municipality gave a population of 959,537. The number now returned exceeds that of 1901 by 26 per cent. but it is only 2 per cent. more than it was at the time of the local enumeration of 1906. It is said that the census of 1911 was taken at a time when many of the immigrants from neighbouring districts had gone to their permanent homes for the Holi holidays, and that many of the cotton mills had closed down temporarily owing to the prohibitive price of the raw material. Like other large trading and industrial centres, Bombay is peopled mainly by immigrants; and more than 80 per cent. of its inhabitants were born elsewhere. Most of them come from the neighbouring districts; more than one-fourth of the total number are from Ratnagiri, while four other districts together supply more than a third. There are 30,000 Goanese, most of whom are in domestic service. Of the immigrants from outside the province, some 50,000, chiefly mill hands, are from the United Provinces, and 12,000 mainly shopkeepers, from Rajputana. Of the immigrants from outside India the largest number (6,000) come from the United Kingdom.

**Madras.**—Unlike Calcutta and Bombay, Madras, which is handicapped by its distance from the coal-fields, has but few large industries. The indigenous handicrafts are decaying and their places not being taken by factories of the modern type. Apart from its being the headquarters of the Local Government, Madras owes whatever importance it possesses to its position as a distributing centre. Of its total population (518,660), only one-third are immigrants, and of these only 12 per cent. have come from places beyond the limits of the Madras Presidency. The great majority are natives of the four districts in the immediate vicinity of the city.

The population grew fairly rapidly during the twenty years prior to 1901, but since then it has been almost stationary. There has been an increase of about one per cent. in the number of persons born in the city, but fewer of them

## GROWTH OF THE INDIAN POPULATION—contd.

	1911.	1901.	1891.	1872.
STATES AND AGENCIES .. .. .	70,888,854	62,755,116	66,073,835	20,998,925
Assam State (Manipur) .. .. .	346,222	284,465	221,070	....
Baluchistan States .. .. .	426,291	428,640	....	....
Baroda State .. .. .	2,032,798	1,952,692	2,413,396	1,997,598
Bengal States .. .. .	822,565	740,299	718,310	567,827
Bihar and Orissa States .. .. .	3,945,209	3,314,474	3,628,018	1,728,900
Bombay States .. .. .	7,411,675	6,808,559	8,081,950	6,797,970
Central India Agency .. .. .	9,356,980	8,197,805	10,136,403	....
Central Provinces States .. .. .	2,117,002	1,631,140	1,712,562	928,116
Hyderabad State .. .. .	13,374,676	11,141,142	11,537,040	....
Kashmir State .. .. .	3,158,126	2,905,578	3,543,952	....
Madras States .. .. .	4,811,841	4,188,086	3,700,622	3,289,392
Mysore State .. .. .	5,806,193	5,339,399	4,943,604	5,055,402
N.-W. F. Province (Agencies and Tribal areas) .. .. .	1,622,094	83,962	....	....
Punjab States .. .. .	4,212,794	4,424,398	4,263,280	....
Rajputana Agency .. .. .	10,530,432	9,853,366	12,171,749	....
Sikkim State .. .. .	87,920	59,014	30,458	....
United Provinces States .. .. .	832,036	802,097	792,491	658,720

have been enumerated within the city limits. As compared with 1901 the net gain due to migration is less than 9,000. It is possible that the great demand for labour in Burma, where wages are very high, has attracted many of the labouring classes who would otherwise have sought their living in Madras.

**Hyderabad.**—Next to the three Presidency towns, the largest city in India is Hyderabad, the capital of the Nizam's Dominions. Its population is shown in the local Census Report as 500,623. Hyderabad has hitherto made very little industrial progress, and less than a quarter of its population is drawn from outside.

## HOUSES AND FAMILIES.

Generally speaking it may be said that the labouring classes in India live in one, or at the most two, single room huts. The home of a well-to-do peasant consists of a public sitting room and a cook room and several apartments which are arranged round and open on to a courtyard. In spite of the joint family system the number of houses corresponds very closely to the number of families in the European sense. The total number of houses is 63.7 million, and there are 64.6 million married females aged 15 and over. Except amongst the higher castes who

form but a small fraction of the total population the joint family system is not nearly so common as is frequently supposed. Where it is in vogue, there is often a strong disruptive tendency. In the towns and cities, owing to the high rents, the unit for all below the middle class is the room, not the house.

### Average population per house

1881	..	..	..	..	..	5.8
1891	..	..	..	..	..	5.4
1901	..	..	..	..	..	5.2
1911	..	..	..	..	..	4.9

## MOVEMENT OF THE POPULATION.

According to the census returns, the total population of India has increased by 7.1 per cent. during the last decade, and by 52.9 per cent. since 1872, but the real gain since the latter date is very much less than this. Large tracts of country, including the Central India and Rajputana Agencies, Hyderabad and the Punjab States, which were omitted from the census returns of 1872, were included in those of 1881. In 1891 the greater part of Upper Burma and Kashmir and several smaller units were enumerated for the first time. In 1901 the most important additions were a portion of Upper Burma and the greater part of Baluchistan. In 1911 the Agencies and tribal areas in the North-West Frontier Province, together with a few smaller areas, were included within the scope of the enumeration. The real increase in the population in the last 39 years is estimated at about 50 millions, or 19 per cent. This is less than half the increase which has taken place in the same period amongst the Teutonic nations of Europe, but it considerably exceeds that of the Latin nations. In France the population has grown by less than 7 per cent. since 1870, but this is because of its exceptionally low birth-rate. In India the birth-rate is far higher than in any European country; and it is the heavy mortality especially amongst infants, which checks the rate of increase.

**Famine and Disease.**—In addition to the causes which ordinarily govern the movement of the population, India is subject to two special factors—famine and epidemic disease. The decade preceding the census of 1911 was free from widespread famines such as those of the preceding ten years. In 1907 there was a partial failure of the monsoon which was felt over a wide area, extending from Bihar to the Punjab and Bombay, and causing actual famine in the United Provinces and in a few districts elsewhere. Prices ruled high in most years and there was an extension of special crops, such as jute and cotton, which are more profitable to the cultivator than food grains. It was on the whole a period of moderate agricultural prosperity. From the point of view of public health, the census period would have been an average one, but for the ravages of plague. Breaking out in

Bombay in 1896, it has by March 1901 caused a recorded mortality of half a million. Since then it has continued its ravages, especially in Bombay and Upper India. The mortality from it rose from about a quarter of a million in 1891 to 1.3 millions in 1907. It fell below a quarter of a million in each of the next two years, but in 1910 it exceeded half a million. The total number of deaths from plague during the decade was nearly 6.5 millions of which over one-third occurred in the Punjab and two-fifths in the United Provinces and Bombay, taken together. The disease fortunately has failed to establish itself in Bengal, Assam, and on the East Coast and in the extreme south of the Peninsula. This however is only the recorded mortality; in time of epidemic the reporting agency breaks down and large numbers of deaths escape registration. Plague attacks women more than men, and people in the prime of life more than the young and old. If plague is omitted, and it is assumed that the mortality of the decade would otherwise have remained normal, the population of the census of 1911 would have been greater than it was by at least 6.5 millions. In other words, the population would have increased by 9.3 instead of 7.1 per cent.

**General Conclusions.**—The most noticeable feature is the continuous rapid growth in Burma. Lower Burma has grown by 135 per cent. since 1872 and the whole Province including Upper Burma, which was annexed in 1886, by 37 per cent. since 1891. In Assam including Manipur the increase since 1872 amounts to 70 and in the Central Provinces and Berar to 47 per cent. In the other main provinces the rate of growth has been much slower. In some provinces, such as Burma, Assam and Bengal there has been continuous progress but others, at some time or another, have sustained a set-back. In the larger provinces at least, the internal variations are also frequently considerable. In Bengal one district has at the present time a smaller population than it had in 1872, while four others have more than doubled their population since that date.

In British territory there has been a gain of 9.1 per cent. over about nine-tenths of the area,

## SUMMARISED GROWTH OF THE INDIAN POPULATION.

	1901 to 1914.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. Increase (+), Decrease (-).
INDIA	..	..	..	..	+108,994,036
PROVINCES	..	..	..	..	+59,104,107
Almer-Merwara	..	..	..	..	+105,064
Andamane and Nicobars	..	..	..	..	....
Assam	..	..	..	..	+2,562,868
Baluchistan	..	..	..	..	....
Bengal	..	..	..	..	+11,363,612
Bihar and Orissa	..	..	..	..	+3,003,602
Bihar	..	..	..	..	+4,017,342
Orissa	..	..	..	..	+1,528,597
Chota Nagpur	..	..	..	..	+2,457,663
Bombay (Presidency)	..	..	..	..	+3,871,280
Bombay	..	..	..	..	+2,037,554
Sind	..	..	..	..	+1,306,370
Aden	..	..	..	..	+26,376
Burma	..	..	..	..	9,368,069
Central Provinces and Berar	..	..	..	..	+3,965,040
Central Provinces	..	..	..	..	+3,135,532
Berar	..	..	..	..	+829,508
Coorg	..	..	..	..	+6,664
Madras	..	..	..	..	+10,174,782
North-West Frontier Province (Districts and Adminis- tered Territories).	..	..	..	..	+4,562,217
Punjab	..	..	..	..	+5,180,040
United Provinces of Agra and Oudh	..	..	..	..	+3,843,079
Agra	..	..	..	..	+1,336,861
Oudh	..	..	..	..	..

with three quarters of the total population, and a loss of 5·3 per cent. in the remaining one-tenth of the area and one-fourth of the population. The contrast in different parts of the Native States is still more striking. The net increase of 10·3 per cent. is the outcome of a gain of 14·3 per cent. in four-fifths of the total area and population, coupled with a loss of 6·2 per cent. elsewhere. The relatively greater net increase in the Native States as compared with British territory is explained by the fact that many of the States suffered severely from famine in the previous decade when they sustained a net loss of 5 per cent., while British territory gained 4·7

per cent. Apart from this, in ordinary circumstances a comparatively high rate of increase is to be expected in the Native States, as they are, on the whole, more undeveloped than British territory, and contain a much larger proportion of cultivable waste land. The net increase in India as a whole during the last decade is the resultant of a gain of 10·3 per cent. in an area of 1,517,000 square miles, with a population of 245 millions and a present density of 162 to the square mile, and a loss of 5·5 per cent. in an area of 218,000 square miles with a population of 68 millions and a density of 312 to the square mile.

## MIGRATION.

In India there are two currents of migration—minor and major. The chief of the minor movements is the custom, almost universal amongst Hindus, whereby parents seek wives for their sons in a different village from their own. Of the 26·5 million natives of India who were enumerated in a district other than that in which they were born, 16·5 millions, or 62 per cent. were born in a district adjoining that in which they were enumerated. The major currents of migration are governed by economic conditions. The most noticeable movements are the large streams of emigration from Bihar and Orissa, Madras, the United Provinces and Rajputana, and of immigration into Bengal, Assam and Burma. Owing to its fertile soil, Bengal is able to support practically the whole of its dense indigenous population by agriculture. It is necessary therefore to man the jute mills by imported labour, as also the tea gardens of Darjiling and Jalpaiguri and to draw the general labour supply from outside. In Bengal the net excess of immigrants over emigrants is close on 1,400,000. Of these about 236,000 are Natives of a district in Bihar and Orissa, or Assam, contiguous to the Bengal district in which they were enumerated. Assam and Burma are sparsely populated and the land available for cultivation being ample, very few of the indigenous inhabitants find it necessary to work for hire. The tea gardens of Assam and the rice mills and oil wells of Burma have to obtain their coolies elsewhere. In Assam 12·5 per cent. and in Burma 5 per cent. of the population are immigrants. On an average 51,000 labourers and dependants go each year to the tea gardens of Assam. In Burma, Madras supplies labourers for the rice-milling, oil and other industries, whilst many coolies flock into the province from Chittagong, chiefly for the rice harvest. The net loss to Bihar and Orissa on account of migration is about 1·5 millions. The United Provinces sustain a net loss of about 800,000 from migration, chiefly in the direction of Bengal. Madras being very backward from an industrial point of view, there is no great local demand for labour. At the same time there is an exceptionally large population of the "untouchable" castes, who have no scruples about seeking their livelihood overseas. It provides Ceylon with labour for its plantations, Burma with labour for its industries, and the Federated Malay States with labour for their rubber plantations. The enterprising Marwari traders of Rajputana have penetrated to all parts of India and are to be found in very important bazars throughout Bengal and even in Assam. Bombay is industrially more advanced than Bengal, but as its soil is less productive

there is a large local supply of labourers, chiefly from the southern coast strip called the Konkan. The United Provinces give more than four times as many labourers to Bengal as to Bombay. As for the migration between British India and Native territory, it involves a loss of 135,000 to the Native States.

**Asiatic Immigration.**—Of the 504,000 persons born in other Asiatic countries who were resident in India at the time of the census, more than half were natives of Nepal. Of the 92,000 immigrants from Afghanistan all but 11,000 were enumerated in Northern India. The rest were cold weather visitors who travel about the country peddling piece-goods and other articles of clothing. These Cabuli pedlars cause great trouble in Bengal by their truculence. The number of Chinese is 80,000. Most of these are found in Burma, but the Chinaman is making his way into Bengal, where he is appreciated as a shoemaker and carpenter. From Arabia come 23,000 immigrants, chiefly to Bombay.

**Non-Asiatic Immigration.**—The total number of immigrants from countries outside Asia is 146,265. Of these 131,968 come from Europe. The United Kingdom sends 122,919; Germany comes next with only 1,360 and then France with 1,478. As compared with 1901 there is an increase of about 26,000 in the number of immigrants from the United Kingdom. Of the British-born 77,626 were serving in the army as compared with 60,965 at the time of the previous census, when a strong contingent had been sent from India to reinforce the British garrison in South Africa. The rest of the increase is accounted for by the industrial development which has taken place, the extension of railways, and the growing extent to which Englishmen in India marry. The number of females born in the British Islands and enumerated in India has risen during the decade from 14,063 to 19,494. The figures for other European countries do not call for any special comment.

**Emigration from India.**—The Indian census statistics naturally tell us nothing of the emigration from India to other countries. This emigration is of two kinds, the movement across the border which separates India from contiguous countries, such as China, Nepal, Afghanistan and Persia, much of which is of the casual type, and emigration to distant countries. No statistics are available regarding the emigration from India to the countries on its borders. There is probably very little movement from Burma into China.

## SUMMARISED GROWTH OF THE INDIAN POPULATION—contd.

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. increase (+) decrease (—).
STATES AND AGENCIES					
Assam State (Manipur)	+8,133,738	-3,318,719	+11,000,322	+34,014,588	+49,889,929
Baluchistan States	+61,757	....	....	....	....
Barda State	-8,349	..	....	....	....
Barda State	+80,106	-462,704	+233,238	+184,560	+55,200
Bengal States	+82,266	+27,989	+18,049	+130,434	+254,738
Bihar and Orissa States	+630,735	+286,456	+617,407	+686,711	+2,221,309
Bombay States	+503,116	-1,173,391	+1,144,057	+130,923	+613,705
Central India Agency	+859,175	-1,638,598	+874,496	....	....
Central Provinces States	+185,862	-81,422	+325,268	+459,178	+1,188,886
Hyderabad State	+2,233,534	-395,898	+1,691,446	....	....
Islamir State	+252,548	+301,626	....	....	....
Madras States	+623,755	+487,464	+355,773	+55,457	+1,522,449
Mysore State	+260,794	+595,795	+757,416	-899,214	+750,701
N.W. F. Provinces (Agencies and Tribal areas)	+1,538,132	....	....	....	....
Punjab States	-211,604	+161,118	+401,597	....	....
Upjutana Agency	+677,066	-2,318,383	+2,227,494	....	....
Uttar Pradesh State	+28,906	+28,556	....	....	....
United Provinces States	+59,939	+2,606	+50,741	+102,030	+193,316

but, on the other hand, it is believed that the emigration into the somewhat sparsely peopled Nepal terai from some of the adjacent British districts, where the population is much congested, exceeds the countervailing immigration. Very few people go from British territory to settle permanently in Afghanistan or Persia, but at the time when the last census was taken owing to drought in Baluchistan, a considerable number of Nomad Brahuis from Chagai, and of Baloch from Mekran had passed over temporarily into Afghanistan and Persia. At a rough guess the number of emigrants across the Indian Frontier may be taken to be about a fifth of a million.

**Emigration to Distant Countries.**—Of the emigrants to distant countries a certain number find their way to French or Dutch Colonies, such as Surinam, Martinique and Guadeloupe. But the majority go to other parts of the British Empire. The total number of emigrants from India to other parts of the British Empire slightly exceeds a million, of whom about two-thirds are males; more than four-fifths of the aggregate are Hindus and only one-tenth are Mahomedans. Of the total number, about 474,000 were enumerated in Ceylon, 231,000 in the Straits Settlements and the Malay States, 88,000 in British Guiana, 73,000 in Natal, 51,000 in Trinidad, 35,000 in Mauritius, 29,000 in Fiji and 8,000 each in Jamaica and Zanzibar. About one-fifth of these emigrants failed to specify their province of birth; of the remainder no less than 693,000 or 85 per cent. were from Madras, 32,000 from Bengal, about 20,000 each from the United Provinces and Bombay, 16,000 from Bihar and Orissa, 13,000 from the Punjab and 8,000 from the Mysore State. The number who emigrated from other parts of India was inconsiderable. Most of these emigrants to the colonies went as ordinary labourers in sugar, tea, coffee, rubber and other plantations, but a large number of those from Bombay and Bengal are lascars on ships, while many of the natives of the Punjab are employed in the army or military police.

**Ceylon.**—The movement to Ceylon is of long-standing. Owing to the rapid expansion of tea cultivation, the number of natives of

India enumerated in that Island increased by 65 per cent. in the decade ending in 1901. Since then there has been a further increase of nearly 10 per cent. chiefly on account of the new rubber plantations. The great majority of these emigrants are from the southern districts of Madras. Mysore sends about 8,000, Travancore 7,000 and Cochin and Bombay 3,000 each. Most of them are temporary emigrants, who return after a time to their homes in Southern India. The total number of Tamils enumerated in Ceylon exceeds a million, but about half of them have been domiciled in the Island for many centuries and barely 100,000 are the offspring of recent settlers.

**Malaya.**—The emigration to the Straits Settlements and the Malay States is of quite recent growth, and is due almost entirely to the demand for labour on the rubber plantations. Most of the emigrants are temporary settlers, who return to their homes when they have saved a little money; and the total number of Indians enumerated there exceeds by only 12 per cent. the number who returned to India as their birth-place. Almost four-fifths of the total number are males. Here also Madras is the principal source of supply, the Punjab (8,754) being the only other province which sends an appreciable number.

**South Africa.**—In Natal, there has been a great deal of permanent settlement; and of the total number of Indians enumerated there, nearly half were born in the colony. Many of these have forgotten their native language and now talk only English. But it is in Mauritius that the process of colonisation has made most headway. The introduction of Indian coolies to work the sugar plantations dates from the emancipation of the slaves, three quarters of a century ago; and from that time onwards many of the coolies who have gone there have made the island their permanent home. Though it now contains only 35,000 persons who were born in India, the total number of Indians is 258,000, or about 70 per cent. of the whole population. A large part of the island is now owned by Indians, and they are dominant in commercial, agricultural and domestic callings.

## RELIGIONS.

India is a land of many religions. All the great religious faiths of mankind are represented in its population by communities, whose origin carries us back to the early history of their respective creeds. Hinduism and its offshoots, Buddhism and Jainism, are autochthonous. The Jews of Cochin have traditions which carry back their arrival on the coast to the time of their escape from servitude under Cyrus in the sixth century B. C. The Syrian Christians of Malabar ascribe the introduction of Christianity and the establishment of their original Church to the Apostle St. Thomas, in the year 52 A.D. Nearly two centuries before the followers of Mahomed obtained a footing in India as conquerors, a peaceful trading colony of Arabs had settled on the Malabar coast. The Parsi settlement in Gujarat dates from about the same period. These facts are recalled here because not only Europeans, but even educated Indians, speak as if the first foreign settlement in India

was that which followed the Mahomedan conquest, and that Christianity was first brought to the country by the Portuguese. They also dispose of another erroneous idea that up to the time of the Mahomedan conquest, Hinduism absorbed all the foreign elements, which found their way into the country. No doubt Greeks, Bactrians and Scythians were so absorbed into the structure of Hinduism, but the fact that the Jews, the Syrian Christians and the Parsis have remained distinct from Hinduism, shows that this was not the case universally. If we may hazard a conjecture, it would seem that the ancient Hindu policy towards immigrants who came by land differed from that observed in the case of immigrants by sea. The Indo-Aryan himself entered the country through the mountain passes in the North-West, and knew something of the land which lay beyond. But the sea was always something of a mystery and a terror to him, and those

VARIATION IN POPULATION OF THE 30 CHIEF TOWNS.

	1911.	1901.	1891.	1881.	1872.
CALCUTTA AND FORT *	896,067	847,796	685,305	612,307	633,009
BOMBAY .. ..	979,445	776,006	821,764	773,196	844,405
MADRAS AND CANTONMENT .. ..	519,660	509,346	452,518	405,848	397,532
Agra and Cantonment .. ..	185,449	188,022	198,662	160,203	149,008
Almehabad and Cantonment .. ..	216,777	185,889	148,412	127,621	119,672
Allahabad and Cantonment .. ..	171,997	172,052	175,246	160,118	143,693
Amritsar and Cantonment .. ..	152,756	162,429	136,766	151,896	135,813
Bangalore Civil and Military Station † ..	100,834	89,599	100,081	93,540	81,810
Bareilly and Cantonment .. ..	129,462	133,167	122,837	115,138	104,533
Benares and Cantonment .. ..	203,804	213,079	223,375	223,573	178,300
Cawnpore and Cantonment .. ..	178,557	202,797	194,048	155,369	125,877
Dacca .. ..	108,551	89,733	81,585	78,369	68,595
Delhi and Cantonment .. ..	232,837	208,575	192,579	173,393	154,417
Howrah .. ..	179,006	157,594	116,606	90,813	84,069
Hyderabad and Cantonment .. ..	500,823	448,466	415,039	367,417	....
Jalpur .. ..	137,098	160,167	158,787	142,578	....
Jubbulpore and Cantonment .. ..	100,651	90,533	84,682	76,023	55,469
Karachi and Cantonment .. ..	151,903	116,683	103,199	73,560	56,753
Lahore and Cantonment .. ..	228,987	202,964	176,854	157,287	125,413
Lucknow and Cantonment .. ..	259,798	264,049	273,028	261,303	284,779
Madras .. ..	134,130	105,984	87,428	73,807	51,987
Mandlay and Cantonment .. ..	138,299	183,816	188,815	....	....
Meerut and Cantonment .. ..	116,227	118,129	119,390	99,565	81,386
Nagpur .. ..	101,415	127,734	117,014	98,299	84,441
Patna .. ..	136,153	134,785	165,192	170,654	138,900
Poona and Cantonment .. ..	158,856	153,320	161,390	129,751	139,886
Rangoon and Cantonment .. ..	293,316	245,430	182,080	134,176	98,745
Rinagar and Cantonment .. ..	126,344	122,618	118,960	....	....
Surat and Cantonment .. ..	114,868	119,308	106,229	109,844	107,855
Trichinopoly and Cantonment .. ..	123,512	104,721	190,609	84,449	76,530

\* The above figures for Calcutta exclude the population of Cossipore-Chitpur, Manicktola and Garden Reach. These places have a separate Municipal administration, but for all practical purposes they form an integral part of Calcutta. So also does Howrah, except that it lies on the opposite bank of the Hoogly. If the first-mentioned Municipalities be added, the population of Calcutta rises to 1,043,307. If Howrah also be included, it comes to 1,222,313.

† Bangalore City and Bangalore Civil and Military Station are structurally a single unit, but for the purpose of the census they have been treated as separate places.



who came from beyond the sea were looked upon as beings of a different clay. They were treated hospitably, and in course of time they assimilated much of the influences of their Hindu environment. But they remained all the same separate communities, and no attempt was made to incorporate them in the great mass of Hinduism. The prohibition of sea voyage to members of the higher castes is another proof of the peculiar prejudice which ancient Indians cherished against inhabitants of countries divided from India by intervening seas.

**Origin of Hinduism.**—We have spoken alone of Hinduism as being autochthonous. The opinion generally held is that the ancestors of the Vedic Indians were immigrants from Central Asia. An Indian scholar of some repute has recently endeavoured to show that the received opinion is not borne out by the evidence available in the ancient literatures of India. Whatever may be the value attaching to his contention that the Vedic Indians were not immigrants or descendants of immigrants, but only a section of the indigenous population addicted to the cult of fire-worship, it is true, as he says, that there is no expression in the Vedas of a longing, lingering remembrance of a foreign homeland, such as one might expect to find in the literature of an immigrant race. This is all the more remarkable as an intense attachment to the land they lived in is manifest in all their compositions. A Sanskrit couplet in which the names of the seven great rivers of India, the Ganges, the Jumna, the Godavari, the Saraswati, the Nerbudda, the Indus and the Cauvery, are strung together in pious praise, is recited daily by millions of Hindus at their daily devotions, and helps to keep them in mind of the sanctity of the Indian Continent in Hindu eyes. If the ancient Hindus were immigrants, they not only took exceptional care to blot out all memories of the land from which they came from their own minds, but they also strove by every means in their power to bind the reverence and love of their posterity to India as the land *par excellence* of religion and morality, so much so that the name Hindu, in the orthodox acceptance of the term, is not applicable to anyone who is not born in India. If the ancestors of the Hindus were foreigners in India, they must have set themselves, as a matter of deliberate policy, to intertwine the deepest affections and the highest aspirations of their race with the land in which they had settled, to the entire exclusion of the land whence they had come.

**Evolution of Hinduism.**—Following from the theory that the ancestors of the Hindus were immigrants from Central Asia, is the explanation generally given of the varieties of religious beliefs and social practices to be found within the pale of Hinduism. Hinduism, it is the common idea, was originally a pure and simple creed which has had to compromise with the Animism of the population, amongst whom it spread, by accepting several of its godlings and superstitions. The greatest obstacle in the way of this explanation is that there is no evidence whatsoever of any organised missionary activity among the Hindus at any time. The immense distances and the absence of means of communication, would

of themselves have made such activity difficult. Moreover, a compromise implies selection and rejection and the existence of some agency entrusted with the duty of selection. As a fact, however, we find that Hinduism has exercised very little selection, and that it covers practically all the beliefs and customs which prevail amongst the tribes who are included within its pale. Such a state of things is more consonant with the view that the purer forms of Hinduism are highly evolved stages of the cruder forms which are still observed by the less educated and prosperous sections of the community. This view, namely, that the higher forms of Hinduism are evolved from lower ones, rather than that the latter are corruptions of the former, gains support from what is now generally accepted as being the true explanation of the origin of certain social customs. Twenty years ago, it was generally held that the custom of child marriages, for instance, was of sacerdotal origin and was most largely prevalent amongst the higher castes from whom it spread to the lower. Recently, however, it has been proved that child marriages are prevalent far more largely and in a far grosser form amongst the lowest castes than amongst the higher castes, and that amongst the latter, it is a survival from the times when the caste system was less rigid and intermarriages, that is to say, the taking of wives by the higher castes from the lower, were common. It may be added that the two most characteristic beliefs of Hinduism, namely, that in the transmigration of souls and in the law of *Karma* or retribution, are held with, if anything, more tenacity by the lower than by the higher castes.

**Scope of Hinduism.**—From this point of view, the varying beliefs and customs which go under the name of Hinduism not only offer no difficulties, but furnish the right clue to the understanding of this unique socio-religious system. They explain why the term "religion" as applied to Hinduism does not adequately express its scope and method. Hinduism has no settled creeds which are obligatory on every Hindu. It enforces no fixed and uniform moral standards on the innumerable sects and castes which bear its name. It extends its suzerainty to monogamous, polygamous and even polyandrous unions between the sexes and, in the case of the so-called *devadasis*, countenances a life of open irregularity. An Indian newspaper recently instituted an interesting discussion on the question "Who is a Hindu." An eminent Hindu lawyer, who subsequently rose to be a judge of one of the Indian High Courts, laid down that a Hindu was one to whom the Indian Courts would apply the Hindu law. The learned lawyer, however, forgot that there are Mahomedan castes which follow the Hindu law in regard to the inheritance of and succession to property.

And yet, though Hinduism refuses to conform to almost every one of the ideas which we usually associate with the term "religion," it is impossible to deny that it occupies a unique and highly important place amongst the religious systems of the world. The reason why it does not fit into our definition of religion is that it represents a fundamentally different line of evolution in the history of religious

STATISTICS OF RELIGIONS.

Religion							India.	British Provinces.	Native States.
INDIA							315,156,396	244,267,542	70,888,854
Hindu	..	..	..	..	..	..	217,536,892	163,821,431	53,965,461
Brahmanic Arya	..	..	..	..	..	..	217,337,943	163,381,380	53,956,563
	..	..	..	..	..	..	248,445	234,841	8,604
Brahmo	..	..	..	..	..	..	5,504	5,210	294
Sikh	..	..	..	..	..	..	3,014,466	2,171,908	842,558
Jain	..	..	..	..	..	..	1,248,182	458,578	789,604
Buddhist	..	..	..	..	..	..	10,721,453	10,644,409	77,044
Zoroastrian (Parsi)	..	..	..	..	..	..	100,096	86,155	13,941
Musalman	..	..	..	..	..	..	66,647,299	57,423,889	9,223,410
Christian	..	..	..	..	..	..	3,876,203	2,492,284	1,383,919
Jew	..	..	..	..	..	..	20,980	18,524	2,456
Animistic	..	..	..	..	..	..	10,295,168	7,348,024	2,947,144
Minor Religions and Religion not returned	..	..	..	..	..	..	37,101	2,340	34,761
Not enumerated by Religion	..	..	..	..	..	..	1,608,556	.....	1,608,556

POPULATION ACCORDING TO RELIGION AND EDUCATION (CENSUS OF 1911).

Religions							Males.			
							Total Population.	Illiterate.	Literate.	Literate in English.
Hindu	..	..	..	..	..	..	110,865,731	99,612,597	11,223,134	1,013,596
Sikh	..	..	..	..	..	..	1,734,773	1,550,610	184,163	11,490
Jain	..	..	..	..	..	..	643,553	324,968	318,585	13,030
Buddhist	..	..	..	..	..	..	5,286,142	3,151,761	2,134,381	21,767
Parsi	..	..	..	..	..	..	51,123	11,128	39,995	25,334
Muhammadan	..	..	..	..	..	..	34,709,365	32,319,599	2,389,766	176,051
Christian	..	..	..	..	..	..	2,010,724	1,422,154	588,570	252,591
Animistic	..	..	..	..	..	..	5,088,241	5,034,408	53,833	1,521
Minor and Unspecified	..	..	..	..	..	..	28,818	22,430	6,388	2,981
Total Males	..	..	..	..	..	..	160,418,470	143,479,655	16,938,815	1,518,361
							Females.			
Hindu	..	..	..	..	..	..	106,720,714	105,905,904	814,810	23,659
Sikh	..	..	..	..	..	..	1,279,667	1,262,387	17,280	238
Jain	..	..	..	..	..	..	604,629	580,509	24,120	209
Buddhist	..	..	..	..	..	..	5,435,086	5,117,748	317,338	1,383
Parsi	..	..	..	..	..	..	48,973	17,755	31,218	8,347
Muhammadan	..	..	..	..	..	..	31,883,812	31,746,005	137,807	3,940
Christian	..	..	..	..	..	..	1,865,472	1,613,177	252,295	112,643
Animistic	..	..	..	..	..	..	5,129,303	5,126,316	2,987	74
Minor and Unspecified	..	..	..	..	..	..	29,263	26,355	2,908	1,533
Total Females	..	..	..	..	..	..	152,996,919	151,396,156	1,600,763	152,026
Total Population	..	..	..	..	..	..	313,415,389	294,875,811	18,539,578	1,670,387

thought. In other races the line of evolution was from polytheism to monotheism, but in India it was from polytheism to the higher pantheism. Contrasting the development of the Judaic idea of God with that of the Hindus, Dr. Harold Haiffing observes "With the Hindus there was no God who claimed sole sway; they went back to the power which makes all gods what they are, to the inner aspirations and needs which find vent for themselves in prayer and sacrifice. Following an extremely remarkable line of thought that which drives men to worship gods was itself regarded as the true divine power. Brahma meant originally the magical, creative word of prayer, but it afterwards came to denote the principle of existence itself, so that we have a transition from the idea of motion towards that of its goal, from prayer to the object addressed in prayer." The Indian philosopher saw the whole universe transfused and overspread with Deity. He perceived how evil was being perpetually transformed to good in the cosmic process spreading out before the poet and the philosopher, endless and timeless, to whom the evil and the good seemed but different stages in a great common process of which the secret was known only to the Supreme Being. No European writer has caught the innermost essence of the Hindu philosopher's idea of the Supreme, so faithfully, and expressed it so felicitously as Sir Edwin Arnold in his "Light of Asia."

Before beginning, and without an end,  
As space eternal and as surety sure,  
Is fixed a Power divine which moves to good,

Only its laws endure.  
It is not marred nor stayed in any use,  
All liketh it; the sweet white milk it brings  
To mothers' breasts, it brings the white drops too,

Wherewith the young snake stings.  
It slayeth and it saveth, nowise moved  
Except unto the working out of doom;  
Its threads are Love and Life; Death and Pain

The shuttles of its loom.  
It maketh and unmaketh, mending all;  
What it hath wrought is better than had been;

Slow grows the splendid pattern that it plans

Its wistful hands between.

The ethical values of Hinduism are not different from those of other great religions. Like them it attaches little importance to the qualities which make for worldly success, and most importance to self-sacrifice, humility and kindness to all. Only its methods differ. On the whole, however, the Hindu socio-religious scheme, owing to its tendency to make the individual human being a passive instrument in the hands of a Higher Power instead of an active co-operator with it, has favoured stability at the expense of progress.

**Hindu sects.**—Hinduism is made up of many sects and cults. It is usual to speak of Hinduism as it was before Buddhism, as a single creed, but this is because the literature that has come down to us is the literature of the sect that came to supersede all others.

But even in it, we can, by reading between the lines, discover the existence of rival sects. Even the Vedas themselves are the literature probably of one of several sects which happened to be gifted with a talent for letters. The rapid multiplication of sects, however, was undoubtedly encouraged by the introduction of idol worship in imitation of the practice of decadent Buddhism. Hindu religious philosophers recognised three ways of salvation, namely, the way of knowledge, the way of faith and the way of service. Every sect of Hinduism recognises the value of all these three ways, but it differs as to the relative importance to be attached to each. The sect of the great philosopher, Sankaracharya, who maintained that the Supreme Being was the only Reality and that all the phenomenal universe was Maya or illusion, and that salvation came from the realisation of this fact, did not discard faith and service altogether, but only gave these a subordinate position in his scheme of religion. Ramanuja, Madhva and Vallabhacharya who followed him and, in more or less degree, retented his doctrine of the non-reality of the phenomenal universe, laid more stress on faith and service than on knowledge, but they did not discard the path of knowledge altogether. It should be mentioned here that it has been the great misfortune of Hinduism that the path of service has come to mean the path not of altruistic service to mankind but the path of service conceived in a ceremonial sense to priests, religious recluses and mendicants and to idols. It is the great aim of the modern religious reform movements such as the Arya Samaj and the Brahma Samaj to rescue the path of service from this spurious interpretation and to make altruistic social service an integral part of religion. The question of sect, however, does not play a very important part in Hinduism. Except in Southern and to a much smaller extent, in Western India, the great mass of the Hindus are not sectaries. In Southern India, the Vaishnavas and Madhvas will, on no account, worship Shiva or visit a temple dedicated to him. The Lingayaths are a Shiva sect found in the Karnatak districts of the Bombay and Madras Presidencies, and in Mysore, and they have an invincible repugnance to the worship of Vishnu. But these are exceptional instances. But so far as the bulk of the Hindus are concerned, they resort to the nearest shrine whether it be dedicated to Shiva or Vishnu. The attitude of Hinduism to other religions is that they are each of them the most suitable path to salvation for the people who are born in them—that they are all several roads which lead to Heaven. For this reason Hinduism has never been a proselytising religion. This has proved a disadvantage to it face to face with such religions as Mahomedanism and Christianity which not only admit converts, but are actively engaged in seeking them. The proportion of Hindus to the total population has steadily diminished during the last forty years, partly owing to conversions to other religions particularly from amongst the lower classes. Conversions from among members of the higher and literate classes have practically ceased.

**Hinduism.**—The Hindus number 217,583,992 or 60·4 per cent. of the total population of

## OCCUPATIONS OF THE INDIAN PEOPLES.

INDIA .. .. .	313,470,014
<b>A.—PRODUCTION OF RAW MATERIALS</b> .. .. .	227,030,092
<i>I.—Exploitation of the Surface of the Earth</i>	226,550,483
Pasture and agriculture .. .. .	224,695,900
(a) Ordinary cultivation .. .. .	216,787,137
(b) Growing of special products and market gardening .. .. .	2,012,503
(c) Forestry .. .. .	672,093
(d) Raising of farm stock .. .. .	5,176,104
(e) Raising of small animals .. .. .	48,063
Fishing and hunting .. .. .	1,854,583
<i>II.—Extraction of Minerals</i> .. .. .	529,609
Minerals .. .. .	375,927
Quarries of hard rocks .. .. .	75,424
Salt, etc. .. .. .	78,258
<b>B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES</b> .. .. .	58,191,121
<i>III.—Industry</i> .. .. .	35,323,041
Textiles .. .. .	8,306,501
Hides, skins and hard materials from the animal kingdom .. .. .	698,741
Wood .. .. .	3,790,392
Metals .. .. .	1,861,445
Ceramics .. .. .	2,240,210
Chemical products properly so called, and analogous .. .. .	1,241,587
Food industries .. .. .	3,711,675
Industries of dress and the toilet .. .. .	7,750,609
Furniture industries .. .. .	39,268
Building industries .. .. .	2,062,493
Construction of means of transport .. .. .	66,056
Production and transmission of physical forces (heat, light, electricity, motive power, etc.).	14,384
Industries of luxury and those pertaining to literature and to arts and sciences.	2,141,665
Industries concerned with refuse matter .. .. .	1,388,515
<i>IV.—Transport</i> .. .. .	5,028,900
Transport by water .. .. .	982,766
Transport by road .. .. .	2,781,938
Transport by rail .. .. .	1,062,493
Post Office, telegraph and telephone services .. .. .	201,781
<i>V.—Trade</i> .. .. .	17,839,102
Banks, establishments of credit, exchange and insurance .. .. .	1,220,187
Brokerage, commission and export .. .. .	240,858
Trade in textiles .. .. .	1,277,469
Trade in skins, leather and furs .. .. .	296,712
Trade in wood .. .. .	224,838
Trade in metals .. .. .	59,766
Trade in pottery .. .. .	101,981
Trade in chemical products .. .. .	171,927
Hotels, cafes, restaurants, etc. .. .. .	719,052
Other trade in food stuffs .. .. .	9,478,863
Trade in clothing and toilet articles .. .. .	306,701
Trade in furniture .. .. .	173,413

India. Buddhists and Jains together number 11,969,835. Thus 229,556,527 or about 73 per cent. of the Indian people depend for their spiritual sustenance on Hinduism and its offshoots.

The Buddhist population is mostly Burmese, Buddhism having ceased a thousand years ago to count as a leading religion in the land of its birth. Several reasons are usually given to account for the hostility of Hinduism to Buddhism, such as that Buddha denied the authority of the Vedas and the existence of God and of the human soul. Jainism did all this, and yet Jains to-day occupy a recognised position in the Hindu social system. The real reason for the Hindu hostility to Buddhism was that it influenced and was in its turn influenced by in the later years of its prevalence in India, the alien Mongolian consciousness. Hinduism has always been extremely tolerant of indigenous heresies, but it is jealous of outside influence. Indian Buddhism, too, had become extremely corrupt and superstitious long before Hinduism re-established itself as the religion pre-eminently of the Indian people.

**Other Indigenous Religions.**—Buddhism and Jainism were originally only sects of Hinduism. Jainism even now is not so sharply divided from the latter religion as Buddhism is. Jains are everywhere a recognised section of Hindu Society, and in some parts of the country there has been an increasing tendency on their part to return themselves at the Census as Hindus. The outstanding feature of Jainism is the extreme sanctity in which all forms of life are held. The Jains are generally bankers and traders. Their number at the last Census was 1,248,182, the apparent decline being due to the tendency noted above for Jains to return themselves as Hindus. Buddhism is professed but by few persons in India. The Buddhist population of the Indian Empire is mainly Burmese. Their number is 10,721,463. The founders of Buddhism and Jainism are believed to have been contemporaries, whose date is assigned somewhere in the 6th Century B.C. Sikhism, which is the next important indigenous religion, had its origin many centuries later. The founder of Sikhism,

Guru Nanak, flourished in the latter half of the 15th Century of the Christian era. Nanak's teaching amounted to nothing more than pure Theism. He taught that there is only one true God, he condemned idolatry, proclaimed the futility of pilgrimages and rites and ceremonies, and declared that the path to salvation lies through good deeds combined with devotion to the Supreme Being. He preached the brotherhood of men. Sikhism continued to exist as a pacific cult till about the end of the seventeenth century, when the persecutions of Aurangzeb had the effect of converting it into a militant creed. This momentous change was accomplished under the direction of Guru Govind, the tenth and last of the Gurus: "I shall send a sparrow," he once exclaimed and "lo! the imperial falcons will fly before it." On his death-bed, he exhorted his followers to regard the Granth, the sacred book of the Sikhs, as their Guru, to look upon it as the person of the living Guru. After his death, Sikhism passed through a period of deepest gloom, but it soon recovered and in 1758 the Sikhs entered Lahore in triumph. The teachings of Guru Nanak have profoundly affected Hindu thought and life in the Punjab, though the number of persons professing the Sikh religion is only 3,014,466 according to the 1911 Census. This represents an increase of over 40 per cent. since 1901. Two other religious movements, offshoots of Hinduism, remain to be mentioned, namely, the Brahmo-Samaj and the Arya-Samaj. Both of them are less than one hundred years old. The founder of the former was Raja Ram Mohan Roy, and of the latter, Swami Dayanand Saraswati. The Brahmo-Samaj does not believe in an infallible scripture, while the Arya-Samaj accepts the Vedas as Divinely revealed. Both the movements are opposed to idolatry and favour social reform. The Brahmo movement, appealing as it does to the cultured intellect, has not been making as much progress as the Arya-Samaj. The number of persons professing each of these creeds is 5,504 and 243,445 respectively. The stronghold of the Arya-Samaj is the Punjab, that of the Brahmo-Samaj, Bengal.

## Non-Indian Religions.

**Mahomedanism.**—Of non-Indian religions, that is, of religions which had their origin outside India the religion which has the largest number of followers in this country is Mahomedanism. One hundred years before the Muslims obtained a foothold in Sind by right of conquest, they were settled in Cochin as traders and missionaries. The author of Cochin Tribes and Castes refers to a tradition that in the 7th Century, a Mahomedan merchant named Malak Medina, accompanied by some priests, had settled in or near Mangalore. The Kollam era of Malabar dates, according to popular tradition, from the departure of Cheruman Perumal, the last of the Perumal Kings, to Arabia, on his conversion to Islam. The date of the commencement of the era is the 25th August 825 A.D. For about twelve centuries, Islam has existed in India side by side with Hinduism. During that period it has been greatly influenced by Hindu ideas and institutions. Moreover, the Indian converts to Mahomedanism have to a large extent retained

the customs and beliefs of Hinduism. The writer of the article on religions of India in the new edition of the *Imperial Gazetteer* observes of Islam in India. "It has gained some converts from Hinduism it has borrowed from it many of those practices which distinguish it from the original faith of Arabia. By degrees the fervid enthusiasm of the early raiders was softened down; the two religions learned to live side by side; and if the Mahomedan of the later days could never conceal his contempt for the faith of his 'pagan' neighbours, he came to understand that it could not be destroyed by persecution. From the Hindus Islam derived much of its demonology, the belief in witchcraft, and the veneration of departed Pirs or Saints. The village Muslim of the present day employs the Hindu astrologer to fix a lucky day for a marriage, or will pray to the village god to grant a son to his wife. This is the more natural, because conversion to Islam, whenever it does occur, is largely from the lower castes." Mahomedanism has

# **OCCUPATIONS OF THE INDIAN PEOPLES—contd.**

Trade in building materials	..	..	..	..	..	..	84,618
Trade in means of transport	..	..	..	..	..	..	239,396
Trade in fuel	..	..	..	..	..	..	524,932
Trade in articles of luxury and those pertaining to letters and the arts and sciences.							522,130
Trade in refuse matter	..	..	..	..	..	..	8,695
Trade of other sorts	..	..	..	..	..	..	2,192,534
<b>C.—PUBLIC ADMINISTRATIONS AND LIBERAL ARTS</b>	..	..	..	..	..	..	10,912,123
<b>VI.—Public Force</b>	..	..	..	..	..	..	2,398,586
Army	..	..	..	..	..	..	665,278
Navy	..	..	..	..	..	..	4,640
Police	..	..	..	..	..	..	1,728,663
<b>VII.—Public Administration</b>	..	..	..	..	..	..	2,648,005
<b>VIII.—Professions and Liberal Arts</b>	..	..	..	..	..	..	5,325,357
Religion	..	..	..	..	..	..	2,769,489
Law	..	..	..	..	..	..	302,408
Medicine	..	..	..	..	..	..	628,900
Instruction	..	..	..	..	..	..	674,393
Letters and arts and sciences	..	..	..	..	..	..	951,167
<b>IX.—Persons living principally on their Income</b>	..	..	..	..	..	..	540,176
<b>D.—MISCELLANEOUS</b>	..	..	..	..	..	..	17,236,678
<b>X.—Domestic Service</b>	..	..	..	..	..	..	4,599,080
<b>XI.—Insufficiently described Occupations</b>	..	..	..	..	..	..	9,236,210
<b>XII.—Unproductive</b>	..	..	..	..	..	..	3,451,881
Inmates of jails, asylums and hospitals	..	..	..	..	..	..	132,610
Beggars, vagrants and prostitutes	..	..	..	..	..	..	3,318,771

## **DISTRIBUTION OF THE POPULATION.**

	India.	British Provinces.	Native States.
1	2	3	4
Area in square miles	1,802,657	1,093,074	709,583
Number of Towns and Villages	722,495	538,809	183,686
(a) Towns	2,153	1,452	701
(b) Villages	720,342	537,357	182,985
Number of Occupied Houses	63,710,179	49,140,947	14,569,232
(a) In Towns	6,037,456	4,408,121	1,628,335
(b) In Villages	57,672,723	44,731,826	12,940,897
Total Population	315,156,396	244,267,542	70,888,854
(a) In Towns	29,748,228	22,817,715	6,930,513
(b) In Villages	285,408,168	221,449,827	68,958,341
Males	161,338,935	124,873,691	36,465,244
(a) In Towns	16,108,304	12,525,830	3,582,474
(b) In Villages	145,230,631	112,347,861	32,882,770
Females	153,817,461	119,393,851	34,423,610
(a) In Towns	13,639,924	10,291,885	3,348,039
(b) In Villages	140,177,537	109,101,966	31,075,571

two main and several minor sects. The major sects are the Shiah and the Sunni. The great majority of Indian Mussulmans are of the latter sect. The Punjab and Sind in the North-West and East Bengal in the North-East are the strongholds of Islam in India. The Mussulman population of India, according to the Census of 1911, is 66,647,299. Of this number no less than 24 millions are in Bengal, about 12 millions in the Punjab, and about 5 millions in the United Provinces. Amongst Native States, Kashmere has the largest Mussulman population, about  $2\frac{1}{2}$  millions.

**Christianity.**—Indian Christianity has an even longer history than Indian Mahomedanism. According to the tradition prevailing among the Syrian Christians in Malabar, the introduction of Christianity and the establishment of the Original Church in Malabar in the year 52 A.D. are ascribed to the Apostle St. Thomas, who landed at Cranganore or Musiris, converted many Brahmins and others, ordained two Presbyters, and also founded seven churches, six in Travancore and Cochin, and the seventh in South Malabar (Cochin Castes and Tribes, Vol. II, Chapter XVI, p. 435). The history of Roman Catholicism in India dates from the beginning of the sixteenth Century. The first Protestant mission was established two centuries later by the Lutherans who started their work in Tranquebar in South India under Danish protection. The Christian population, according to the last Census, numbers 3,876,203. Nearly  $2\frac{1}{2}$  millions are inhabitants of the Madras Presidency and the Native States connected with it. Bihar and Bombay have each over 200,000 Christians.

**Zoroastrianism.**—This religion was brought or brought back to India in 717 A.D. by Parsis who, fleeing from persecution at the hands of the Mussulman conquerors of their native land, arrived at the little port of Sanjan, sixty miles north of Bombay in that year. According to the Indian antiquarian scholar, the late Rajendralal Mitra, the ancestors of the Hindus and Parsis dwelt together in the Punjab, when a religious schism led to the latter retracing their steps to Persia. This theory derives probability from the names of the beneficent and malefic deities referred to in the Hindu and Parsi sacred books: "What is most striking in the

relations of the two faiths, is," writes Mr. Crooke in his article on the Religions of India in the *Imperial Gazetteer*: "that in the Avesta the evil spirits are known as Daeva (modern Persian Div), a term which the Indo-Aryans applied, in the form Deva, to the spirits of light. By a similar inversion, Asura, the name of the gods in the Rig Veda, suffered degradation and at a latter date was applied to evil spirits; but in Iran, Ahura was consistently applied in the higher sense to the deity, especially as Ahura Mazda, the wise, to the Supreme God." The Parsis have two sects. The principal difference between them appears to be that the holy days of the one precede those of the other by about a month. The number of Parsis, according to the last Census, is 100,096. The majority of the Parsis live in Bombay.

**Jews.**—The Beni-Israel at Kolaba, in Bombay and the Jews at Cochin are descendants of ancient Colonies. The Kolaba Colony dates back to the sixth century, and the Cochin colony to the second century A.D. Both Jewish colonies recognize a white and black section, the latter being those who have more completely coalesced with the native population. The Jews numbered 20,980 at the Census of 1911.

**Animists.**—Since the Census of 1891, an attempt has been made to enumerate the "Animists" separately from the Hindus. 10,295,168 persons are classed as Animists, according to the last Census. The difference between Animism and Anthropomorphism has been stated by Professor Westermarck, to be that, while the animist worships inanimate objects as gods, Anthropomorphism consists in the worship of such objects as representatives and reflection of the Deity. As a subtle distinction of this kind is not within the grasp of the average enumerator, the category of Animists in the Census Schedules is largely conjectural. Mr. Crooke in the *Imperial Gazetteer* observes "Such a classification is of no practical value, simply because it ignores the fact that the fundamental religion of the majority of the people—Hindu, Buddhist, or even Mussulman is mainly Animistic. The peasant may nominally worship the greater gods; but where trouble comes in the shape of disease, drought, or famine, it is from the older gods that he seeks relief."

## SOCIAL INSTITUTIONS.

**Uniformity of Indian Social Life.**—Though India is a land of many religions and though each religious community has, as a rule, lived apart from the other communities for centuries, still there is a considerable uniformity in the arrangements and institutions of their social life. The social system of the Hindus is the type to which all other communities domiciled in the country have hitherto tended to conform. To a large extent, this uniformity of social arrangements is clearly due to the fact that, amongst the Mahomedans and Indian Christians, for instance, the converts from Hinduism continued to retain their old ideas in regard to social conduct. To a smaller extent, the motive which influenced them to conform to Hindu social ideal has been the convenience thereby caused in business intercourse with their Hindu neighbours.

Thus, we find, there is scarcely any community in India which has not been more or less infected by the caste spirit. The Jews, the Parsis, the Christians, and even the Mahomedans have been influenced by it. Other Hindu social institutions and customs which have exerted a similar influence are the joint family system, the custom of child marriages, and of enforced widowhood, and the feeling that contact with persons engaged in certain occupations is polluting. In view of this general similarity of the social institutions of the several Indian communities, a description of the Hindu social system which is the great prototype of them all, will give a general idea of the social life of the Indian population as a whole. It should, however, be mentioned here that, in recent years, as the result of a growing communal consciousness, efforts have been

made by many of the Indian communities to discard whatever is in disaccord with the original simplicity of their respective faiths. But this movement has as yet touched no more than the highly educated fringe, and even among the latter, there are thoughtful men who distrust "revivals" as substitutes for reform.

**Caste.**—The most conspicuous social institution of India is Caste. Caste is based on birth. The effect of caste is to divide society into a number of vertical sections, and not as in modern countries, into horizontal sections. The economic and cultural differences among the members of each caste are great. The millionaire and the pauper, the scholar and the illiterate of one caste, form a social unit. The rich man of one caste must seek a husband for his daughter among the poor of his caste, if he cannot find one of a corresponding position in life. He can on no account think of marrying her to a young man of another caste, though as regards culture and social position, he may be a most desirable match. Thus, each caste is, within itself, a democracy in which the poor and the lowly have always the upper hand over the rich and the high-placed. In this way, the system of caste has, in the past, served as a substitute for State relief of the poor by means of special laws and institutions. To some extent, this is the case even now, but the economic pressure of these days, and the influence of Western education, are profoundly modifying the conception of caste. The growth of the English-educated class on the one hand, and of the modern industrial and commercial class of Indians, on the other with common aspirations and interests, is a factor calculated to undermine the importance of caste. Although for purely social purposes, it will, no doubt, linger for many years longer, it is bound ultimately to collapse before the intellectual and economic influences which are moulding modern India. The question how caste originated has been discussed by several learned Orientalists, but the latest and most authoritative opinion is that its rise and growth were due to several causes, the principal of them being differences of race and occupation. The four original castes of the Hindus have multiplied to nearly two thousand, owing to the dissimilar tendencies of Hindu social life. Some large castes consist of many thousands of families, while others, notably in Gujarat, comprise scarcely a hundred houses. Among Indian Mahomedans, there are several communities which are virtually castes, though they are not so rigidly closed as Hindu castes. Indian Christian converts, in some parts of the country, insist on maintaining the distinctions of their original castes, and in a recent case, one caste of Indian Christians contested, in a Court of Law, a ruling of their Bishop disallowing the exclusive use of a part of their church to members of that caste. The Parsis are practically a caste in themselves. The observations regarding caste apply more or less to the institution of the joint family of which really the former is an extension. This institution is rapidly breaking-up, though the rigidity of the Hindu law of succession operates wholly in its favour.

**The Social Reform Movement.**—The social reform movement among the Hindus

to which reference is made in the foregoing paragraph, had its origin in efforts made by the Government of India, with the co-operation and support of enlightened Hindus in the early part of the last century to put down the practice of *sati*, that is, burning the widow along with her dead husband. This cruel practice, which prevailed particularly among the high caste Hindus in Bengal, was eventually suppressed by legislation. But the discussions which ensued in connection with *sati* question led to the exposure of the hard lot of Hindu widows as a class. Remarriage was prohibited and as child marriages were common, several young girls were condemned to lead a life of celibacy on the death of their husbands. This led to immorality and infanticide by young widows, who were anxious to hide their shame was not infrequent. Led by the Pandit Ishwar Chandra Vidyasagara, a very learned Sanskrit scholar, a movement began which had for its object the removal of the ban on the remarriage of Hindu widows. The Pandit was able to prove from the Hindu religious books that the remarriage of widows had the sanction of antiquity. But it was necessary, in order to establish the validity of the remarriage of Hindu widows beyond doubt, to have a law passed by the Legislative Council of the Governor-General of India. The Pandit and his followers memorialised Government. There was strong opposition from the orthodox masses, but the Government of the day were convinced that justice was on the side of the reformers, and the Hindu Widow Remarriage Act was passed. The controversy on the question of the remarriage of widows led to other consequences. It was felt that the age at which girls were married was absurdly low, and that child marriages were at the root of many social evils. It was also realised that the general illiteracy of Indian women was the greatest obstacle in the way of reforming social customs, and that education of women should be the first plank in the social reform platform. The earliest social reformers in India were the Brahmo Samajists who discarded idolatry and caste. Other reformers since then have endeavoured to propagate ideas of social reform entirely on a secular basis. The Indian National Social Conference is their principal organisation, and it is supported by Provincial and District Conferences and Associations. Social reform ideas have made considerable headway during the last twenty-five years. Widow marriages are of weekly occurrence in some provinces. The restrictions of caste as to inter-dining and sea-voyage have lost much of their force. The age at which girls are married is steadily, if slowly, rising. The education of girls is making rapid progress. An increasing number of them go to high Schools and Colleges every year. But the most significant testimony to the spread of social reform ideas in the country is the remarkable diminution in the volume and weight of the opposition to them. The number of journals devoted to the social reform cause is increasing, and some of the newspapers which had made themselves conspicuous by their virulent opposition to social reform twenty years ago, now recognise its utility and importance.



## SEX.

In India as a whole the proportion of females per thousand males rose steadily from 954 in 1881 to 963 in 1901. It has now fallen again to exactly the same figure as in 1881. The important aspect of these figures is the great contrast they show between India and Europe, where the number of females per thousand males varies from 1,093 in Portugal, and 1,068 in England and Wales, to 1,018 in Belgium, and 1,008 in Ireland. In drawing attention to this disparity the Chief Census Officer argued that the relatively high mortality amongst females was sufficient to account for the difference stated. Then in summarising the causes of this relatively higher mortality he said: "In Europe, boys and girls are equally well cared for. Consequently, as boys are constitutionally more delicate than girls, by the time adolescence is reached, a higher death-rate has already obliterated the excess of males and produced a numerical equality between the two sexes. Later on in life, the mortality amongst males remains relatively high, owing to the risks to which they are exposed in their daily avocations; hard work, exposure in all weathers and accidents of various kinds combine to make their mean duration of life less than that of women, who are for the most part engaged in domestic duties or occupations of a lighter nature. Hence the proportion of females steadily rises. In India, the conditions are altogether different. Sons are earnestly longed for, while daughters are not wanted. This feeling exists everywhere, but it

varies greatly in intensity. It is strongest amongst communities such as the higher Rajput clans, where large sums have to be paid to obtain a husband of suitable status and the cost of the marriage ceremony is excessive and those like the Pathans who despise women and hold in derision the father of daughters. Sometimes the prejudice against daughters is so strong that abortion is resorted to when the midwife predicts the birth of a girl. Formerly, female infants were frequently killed as soon as they were born, and even now they are very commonly neglected to a greater or less extent. The advantage which nature gives to girls is thus neutralised by the treatment accorded to them by their parents. To make matters worse, they are given in marriage at a very early age, and cohabitation begins long before they are physically fit for it. To the evils of early child-bearing must be added unskillful midwifery; and the combined result is an excessive mortality amongst young mothers. In India almost every woman has to face these dangers. Lastly, amongst the lower classes, who form the bulk of the population, the women often have to work as hard as, and sometimes harder than, the men, and they are thus less favourably situated in respect of their occupations than their sisters in Europe." It is but fair to say that this conclusion has been challenged by many Indian writers, who attribute far greater importance than the Chief Census Officer to the omission of females at the enumeration.

## MARRIAGE.

Although recognised in some backward parts, polyandry is now rare in India. With orthodox Hindu marriage is a religious sacrament which cannot be revoked. The Mahomedans allow a man to divorce his wife without any special reason, but he then becomes liable to pay her dower. The permission is seldom acted upon. The Buddhists of Burma regard marriage merely as a civil contract, and either side can annul it. The Hindu law places no restriction on the number of wives a man may have; but most castes object to their members having more than one wife, except for special reasons. A Mahomedan may have four wives, but he also in practice is generally monogamous.

**Marriage Statistics.**—In the population of ages and religions, about half the males and one-third of the females are unmarried; 46 per cent. of the males and 48 of the females are married, and 5 and 17 per cent. respectively are widowed. A reference to the age statistics shows that the great majority of the unmarried of both sexes are very young children, three-quarters of the bachelors being under 15 years of age, while a somewhat larger proportion of the spinsters are under 10; only one bachelor in 24 is over 30, and only one spinster in 14 is over 15. At the higher ages practically no one is left unmarried, except persons suffering from some infirmity or disfigurement, beggars, prostitutes, concubines, religious devotees and mendicants and a few members of certain hypergamous groups who have been unable to effect alliances of the kind which alone are permitted to them by the rules of their community. It is the persons of the above clas-

ses who contribute the 4 per cent. of the males over 40, and the 1 per cent. of the females over 30 who are not, and never have been, married.

**Marriage Universal.**—This universality of marriage constitutes one of the most striking differences between the social practices of India and those of Western Europe. It has often been explained on the ground that, with the Hindus, marriage is a religious necessity. Every man must marry in order to beget a son who will perform his funeral rites and rescue his soul from hell. In the case of a girl it is incumbent on the parents to give her in marriage before she reaches the age of puberty. Failure to do so is punished with social ostracism in this world and hell fire in the next. But it is not only with the Hindus that marriage is practically universal; it is almost equally so with the Mahomedans, Animists and Buddhists.

**Early Marriage.**—Another striking feature of the Indian statistics as compared with those of Western Europe is the early age at which marriage takes place. According to M. Sundbarg's table showing the average distribution by age and civil condition of the people of Western Europe according to the censuses taken about the year 1880, of the population below the age of 20, only one male in 2,147 is married and one female in 142. In India on the other hand, 10 per cent. of the male, and 27 per cent. of the female, population below that age are married. The number of males below the age of 5 who are married is small, but of those aged 5 to 10, 4 per cent. are married, and of these aged 10 to

15, 18 per cent. At '15-20' the proportion rises to 32, and '20-30' to 69 per cent. Of the females under 5, one in 72 is married, of those between 5 and 10, one in ten, between 10 and 15, more than two in five, and between 15 and 20, four in five. In the whole of India there are 2½ million wives under 10, and 9 million under 15 years of age. The Hindu law books inculcate marriage at a very early age, while many of the aboriginal tribes do not give their girls in wedlock until after they have attained puberty.

**Widowhood.**—It is only when we come to a consideration of the widowed that we find a state of things peculiarly Indian and one that seems to be derived from the prescriptions of the Hindu law-givers. The proportion of widowers (5 per cent. of the total male population) does not differ greatly from that in other countries, but that of the widows is extraordinarily large, being no less than 17 per cent. of the total number of females, against only 9 per cent. in Western Europe. When we consider their distribution by age, the difference becomes more still striking, for while in Western Europe only 7 per cent. of the widows are less than 40 years old, in India 28 per cent. are below this age, and 1·3 per cent. (the actual number exceeds a third of a million) are under 15, an age at which in Europe no one is even married.

The large number of widows in India is due partly to the early age at which girls are given in marriage, and partly to the disparity which often exists between the ages of husband and wife, but most of all to the prejudice against the re-marriage of widows. Many castes, especially the higher ones, forbid it altogether, and even where it is not absolutely prohibited, it is often unpopular. Although widow marriage is permitted by their religion, and the Prophet himself married a widow, the Mahomedans of India share the prejudice to some extent. How the re-marriage of widows first came to be objected to, it is impossible to say, but it seems highly probable that the interdiction originated amongst the Aryan Hindus, that it was confined at first to the higher castes, and that it has spread from them downwards.

**Infant Marriage.**—It is difficult to draw from the statistics any definite conclusion as to whether infant marriage is becoming more or less common, but so far as they go, they point to a slight diminution of the practice. The figures for 1901 were abnormal owing to the famines of 1897 and 1900, and it is safer to take the year 1891 as the basis of comparison. There are now 18 Hindu girls per mille who are married at the age of '0-5' as compared with only 16 at that time, but at the age '5-10' the proportion has fallen from 146 to 132 and at '10-15' from 542 to 488. Amongst Mahomedans the proportion at the first mentioned age-period has fallen from 7 to 5, at the second from 83 to 65 and at the third from 474 to 393.

The practice has been denounced by social reformers, since Mr. Malabari opened a campaign a quarter of a century ago; and the Social Conference which holds its meetings annually in connection with the National Congress has made the abolition of child marriage one of the leading planks in its platform. It is, as we have seen, strongly discouraged by the Brahmos in Bengal and the Aryas in Northern India. The more enlightened members of the higher castes who do not allow widows to re-marry are beginning to realise how wrong it is to expose their daughters to the risk of lifelong widowhood, and a feeling against infant marriage is thus springing up amongst them.

In two Native States action has been taken. In Mysore an Act has been passed forbidding the marriage of girls under eight altogether, and that of girls under fourteen, with men over fifty years of age. The object of the latter provision is to prevent those unequal marriages of elderly widowers with very young girls which are popularly believed to be so disastrous to the health of the latter, and which in any case must result in a large proportion of them leading a long life of enforced widowhood. The Gaekwar of Baroda, the pioneer of so much advanced legislation, has gone further. He passed for his State in 1904, in the face of a good deal of popular opposition, an "Infant Marriage Prevention Act", which forbids absolutely the marriage of all girls below the age of nine and allows that of girls below the age of twelve and of boys below the age of sixteen, only if the parents first obtain the consent of a tribunal consisting of the local Sub-Judge and three assessors of the petitioner's caste. Consent is not supposed to be given except on special grounds, which are specified in the Act.

**Widow re-marriage.**—The prohibition of widow marriage is a badge of respectability. Castes do not allow it rank higher on that account in social estimation. There is a strong tendency amongst the lower Hindu castes to prohibit, or at least, to discountenance, the marriage of widows. At the other end of the social structure there is a movement in the opposite direction. Many social reformers have inveighed against the condemnation of virgin widows to perpetual widowhood, and have pointed out that the custom is a modern innovation which was unknown in Vedic times. In many provinces recently there have been cases in which such widows have been given in marriage a second time, not only amongst Brahmos and Aryas, who naturally lead the way, but also amongst orthodox Hindus. A number of such marriages have taken place amongst the Bhatias of the Bombay Presidency. It is said that in the United Provinces considerably more than a hundred widows have been re-married in the last ten years. The actual results no doubt are small so far, but the first step has been taken and the most violent of the opposition has perhaps been overcome.

## EDUCATION.

The general education policy of the Government of India, and its results, are discussed in a special article Education (q. v.) But we may conveniently here indicate some of the education tendencies revealed in the census returns.

Of the total population of India, only 59 persons

per mille are literate in the sense of being able to write a letter to a friend and to read his reply. The number who can decipher the pages of a printed book with more or less difficulty is no doubt much larger. Throughout India there are many Hindus who though unable to write can

out at least the more familiar parts of the *Shahrata* or *Ramayana* to their neighbours, feel that it is meritorious to listen to the recitation of the sacred texts, even though they, and possibly the reader also, may not always fully understand the meaning. Similarly there are many Mahomedans, especially in Northern India, who can read the Koran, though they cannot write a word. Of this minor form of literacy the census takes no count. The number of persons who are literate in the sense in which the term was used at the present census is divided very unequally between the two sexes, of the total male population, 106 per mille are able to read and write, and of the female only 10. In other words there is only one literate female to every eleven males. If we leave out of account children under 15 years of age, the number of literate males per mille is 149, and that of literate females 13.

**Education by Provinces.**—Thanks to the free instruction imparted in the monasteries and the absence of the *pardah* system which hampers the education of females in other parts of India. Burma easily holds the ~~first~~ place in respect of literacy. In the whole population 222 persons per mille are literate and the proportion rises to 314 amongst persons over 15 years of age. In every thousand persons of each sex, 376 males and 61 females are able to read and write. Of the other main British provinces, Bengal and Madras come next with 77 and 75 literate persons per mille respectively. Bombay follows closely on their heels. Then after a long interval, come Assam, Bihar and Orissa and the Punjab. At the bottom of the list are the United Provinces and the Central Provinces and Berar, with 34 and 33 literate persons per mille respectively. Differences similar to those noticed above sometimes have their counterpart within provincial boundaries. Thus in Bihar and Orissa, the Orissa natural division has 64 literate persons per mille and the Chota Nagpur plateau only 23. In the Central Provinces and Berar, the proportion ranges from only 6 per mille in the Chota Nagpur States to 54 in the Nerbudda Valley.

**Native States.**—Education is more widely diffused in British provinces than in the Native States, which, taken as a whole, have only 79 males and 8 females per mille who are literate, as compared with 113 and 11 in British territory. The three Native States of Cochin, Travancore and Baroda, however, take rank above all British provinces except Burma, while in respect of female education Cochin divides with Burma the honours of first place. The Kashmir State where only 21 persons per mille can read and write, is in this respect the most backward part of India.

**By Religion.**—Of the different religious communities excluding the Brahmoss and Aryas whose numbers are insignificant, the Parsis easily bear the palm in respect of education. Of their total number 711 per mille are literate, and the proportion rises to 831, if persons under 15 years of age are left out of account. Of the males nearly four-fifths are literate, and of the females nearly two-thirds. Amongst those over 15 years of age only 8 per cent. of the males and 26 per cent. of the females are unable to read and write. The Jains, who are mostly traders, come next, but they have only two literate persons to every five amongst the Parsis. Half the

males are able to read and write, but only 4 per cent. of the females. It is noticeable, however, that whereas the proportion of literate males is only slightly greater than it was at the commencement of the decade, that of literate females has doubled. The Buddhists follow closely on the Jains, with one person in four able to read and write. Here also we see the phenomenon of a practically unchanged proportion of literate males (40 per cent.) coupled with a large increase in that of literate females, which is now 6 per cent. compared with 4 per cent. in 1901. The Christians (22 per cent. literate) are almost on a par with the Buddhists, but in their case the inequality between the position of the two sexes, is much smaller, the proportion of literate females being nearly half that of males. In order to ascertain how far the high position of Christians is due to the inclusion of Europeans and Anglo-Indians, the figures for Indian Christians have been worked out separately. The result is somewhat surprising; for although the Indian converts to Christianity are recruited mainly from the aboriginal tribes and the lowest Hindu castes, who are almost wholly illiterate, they have, in proportion to their numbers, three times as many literate persons as the Hindus and more than four times as many as the Mahomedans. One Indian Christian in six is able to read and write; for males the proportion is one in four; and for females one in ten. The influence of Christianity on education is strikingly illustrated by the figures for the province of Bihar and Orissa, where the proportion of Indian Christians who are literate is 76 per mille, compared with only 5 per mille amongst their animistic congeners. It has to be remembered, moreover, that many of the Indian Christians had already passed the school-going age at the time of their conversion; the proportion who are able to read and write must be far higher amongst those who were brought up as Christians.

The Sikhs come next in order of merit, with one literate person in every sixteen; for males the ratio is one in ten and for females one in seventy. Here again, while the proportion for males shows only a slight improvement, that for females has doubled during the decade. The Hindus have almost as large a proportion of literate males per mille (101) as the Sikhs, but fewer literate females (8). The Mahomedans with only 69 and 4 per mille respectively, stand at the bottom of the list, except for the Animistic tribes of whom only 11 males and 1 female in a thousand of each sex are able to read and write. The low position of the Mahomedans is due largely to the fact that they are found chiefly in the north-west of India, where all classes are backward in respect of education, and in Eastern Bengal where they consist mainly of local converts from a depressed class. In the United Provinces, Madras and the Central Provinces and Berar they stand above or on an equality with the Hindus and the same is the case in Bombay excluding Sind. In Sind the Mahomedan population is exceptionally illiterate, but in the rest of the Presidency it consists largely of traders, and education is much more widely diffused amongst them than amongst Hindus. The figures for Hindus again are a general average for all castes, high and low. It will be seen further on that some of the higher Hindu castes

are better educated than the Buddhists while others are even less so than the Animists.

**Increase of Literacy.**—The total number of literate persons has risen during the decade from 15.7 to 18.6 millions or by 18 per cent. The number of literate males has increased by 15 and that of literate females by 61 per cent. The proportion who are literate per thousand males has risen from 98 to 106 and the corresponding proportion for females from 7 to 10. If persons under 15 years of age be excluded, the proportions are 138 and 149 for male and 8 and 13 for females. The great improvement in the proportion of literate females is most encouraging. It is true that too much stress should not be laid on this when the actual number is still so small, but, on the other hand, it must be remembered that the rate of increase was equally great in the previous decade, so that it has now been continuous for twenty years. The total number of females over 15 years of age who can read and write is now a million and a quarter compared with less than half a million twenty years ago.

**Progress.**—Before leaving these statistics of schools and scholars we may glance briefly at the progress which they show is being made. The total number of scholars in all kinds of educational institutions in 1891 was only 3.7 millions. In 1901 it had risen to 4.4, and in 1911 to 6.3 millions. 17.7 per cent. of the population of school-going age were at school in 1912 as

compared with 14.8 per cent. in 1907. Between 1891 and 1911 the number of students in secondary schools and Arts Colleges has doubled, and the number in primary schools has increased by 67 per cent., the proportion ranging from 39 per cent. in Bombay to 204 per cent. in the United Provinces. Excluding Madras, where a school final examination has recently taken the place of the Matriculation, or Entrance examination of the University, the number of persons passing that examination has risen from 4,079 in 1891 to 10,512 in 1911. Including Madras the number who passed the Intermediate examination in Arts or Science has risen during the same period from 2,055 to 5,141, and that of those who obtained a degree in Arts, Science, Medicine or Law from 1,437 to 5,373. The general conclusion appears to be that, while the general rate of progress is far greater than would appear from a comparison of the census returns of 1901 and 1911, it is most marked in respect of secondary education.

There was a continuous fall, both in the number and the proportion of persons afflicted from 1881 to 1901; and this has now been followed by a move in the other direction. Though the proportion is smaller the number of the insane and the deaf-mutes is now about the same as it was thirty years ago. The number of lepers and blind however is less by about a sixth than it then was.

### Infirmities.

The total number of persons suffering from each infirmity at each of the last four censuses is shown in the following table:—

Infirmity.	Number afflicted.			
	1911	1901	1891	1881
Insane .. .. .	81,006 26	66,205 23	74,279 27	81,132 35
Deaf-mutes .. .. .	199,891 64	153,168 52	196,861 75	197,215 86
Blind .. .. .	443,653 142	354,104 121	458,868 167	526,748 229
Lepers .. .. .	109,094 35	97,340 33	126,244 46	134,908 57
Total ..	833,644 267	670,817 229	856,252 315	937,063 407

NOTE.—The figures in heavier type represent the proportion per 100,000 of the population.

**Insanity.**—In respect of the prevalence of insanity, India compares very favourably with European countries. According to the latest returns, the proportion of persons thus afflicted in England and Wales is 364 per hundred thousand of the population, or fourteen times the proportion in India. This may be due partly to the fact that the English statistics include the weak-minded as well as those who are actively insane, and to the greater completeness of the return in a country where the majority of the mentally afflicted are confined in asylums; but the main reason no doubt is to be found in the comparatively tranquil life of the native of India. It is well known that insanity increases with the spread of civilisation, owing to the greater

wear and tear of nerve tissues involved in the struggle for existence.

The total number of insane persons exceeds by 9 per cent. that returned in 1891, but their proportion per hundred thousand of the population has fallen from 27 to 26. The decline is fairly general, the chief exceptions being the United Provinces, the North-West Frontier Province and four Native States in the peninsular area. In the United Provinces the number of the insane per hundred thousand of the population has risen from 12 to 18. No satisfactory explanation of this large increase is forthcoming.

**Deaf-Mutes.**—By deaf-mutism is meant the congenital want of the sense of hearing which, in the absence of special schools, such as are only

just beginning to appear in India, necessarily prevents the sufferer from learning to talk. Clear instructions were given to the enumerators to enter only persons who were congenitally afflicted. Some few, perhaps, may have been included in the return who had lost the power of speech or hearing after birth, but the total number of such mistakes is now very small. In India as a whole 74 males and 53 females per hundred thousand are deaf and dumb from birth. These proportions are much the same as those obtaining in European countries.

**Blindness.**—In India as a whole fourteen persons in every ten thousand of the population are blind, as compared with from eight to nine in most European countries and in the United States of America. It is a matter of common observation that blindness is ordinarily far more common in tropical countries than in those with a temperate climate. It is, however, less common in India than in parts of Eastern Europe; in Russia, for instance, nineteen persons in every ten thousand are blind.

**Lepers.**—In India as a whole 51 males and 18 females per hundred thousand persons of each sex are lepers. Of the different provinces, Assam suffers most, then Burma, and then in order Bihar and Orissa, the Central Provinces and Berar, Madras, Bengal, Bombay, the United Provinces, the Punjab and the North-West Frontier Province. In the two last-mentioned provinces there are only 17 male and 8 female lepers per hundred thousand of each sex. The occurrence of leprosy is very local and its prevalence varies enormously within provincial boundaries.

The number of lepers has fallen since 1891 from 126 to 109 thousand, a drop of more than 13 per cent. When it is remembered that the number of persons suffering from the other three infirmities taken together has remained almost stationary, it may be concluded that the decrease in the reported number of lepers is genuine and indicates a real diminution in the prevalence of

the disease. It is possible that this is partly the result of the improved material condition of the lower castes, amongst whom leprosy is most common, and of a higher standard of cleanliness. The greater efforts which have been made in recent years to house the lepers in asylums may also have helped to prevent the disease from spreading. The total number of asylums in India is now 73, and they contain some five thousand inmates, or about 4.7 per cent. of the total number of lepers. This may not seem much, but it has to be remembered that the movement is still in its infancy and that progress has been very rapid in recent years. Complete statistics for 1901 are not readily available, but it is known that in the two provinces of Bengal and Bihar and Orissa, the number of lepers in asylums was then only about half what it is now. The greater part of the credit for the provision of asylums for these unfortunate persons belongs to the Mission for Lepers in India and the East, which receives liberal help from Government. Its latest report shows that there are 3,587 lepers in the forty asylums maintained by the Society.

The belief is growing that leprosy is communicated from one human being to another by some insect, and two South African doctors have recently published papers implicating the bed bug (*acanthia lectularia*). If this theory be correct it is obvious that the segregation of lepers in asylums must reduce the number of foci of the disease, and to that extent prevent it from spreading. It is worthy of note that in many of the districts where the disease was most prevalent in 1891, there has since been a remarkable improvement. Chamba which in 1891 had 84 lepers in every ten thousand of its population, now has only 15; in Birbhum the corresponding proportion has fallen from 35 to 16, in Bankura from 36 to 23, in Simla 29 to 13, in Dehra Dun from 20 to 11, in Garhwal from 17 to 10, in Burdwan from 22 to 14 and in North Arakan from 28 to 20.

## OCCUPATIONS.

Nowhere are the many points of difference in the local conditions of India, as compared with those of western countries, more marked than in respect of the functional distribution of the people. In England, according to the returns for 1901, of every hundred actual workers, 58 are engaged in industrial pursuits, 14 in domestic service, 13 in trade and only 8 in agriculture, whereas in India 71 per cent. are engaged in pasture and agriculture and only 29 per cent. in all other occupations combined. The preparation and supply of material substances afford a means of livelihood to 19 per cent. of the population (actual workers) of whom 12 per cent. are employed in industries, 2 in transport and 5 in trade. The extraction of minerals supports only 2 persons per mille; the civil and military services support 14, the professions and liberal arts 15, and domestic service 18 persons per mille. The difference is due to the extraordinary expansion of trade and industry which has taken place in Western Europe during the last century in consequence of the discovery of the steam engine, and to the great improvement in means of transport and the use of mechanical power in factories of all kinds which have resulted therefrom. In Germany, sixty years ago, the agricultural population was

very little less than it is at the present time in India. There are, as we shall see further on, indications that in the latter country also great changes are impending; and it is not unlikely that, as time goes on, the functional distribution of the people will become less dissimilar from that now existing in Europe.

**The village.**—Until the recent introduction of western commodities, such as machine-made cloth, kerosine oil, umbrellas and the like, each village was provided with a complete equipment of artisans and menials, and was thus almost wholly self-supporting and independent. Its chamars skinned the dead cattle, cured their hides, and made the villagers' sandals and thongs. Local carpenters made their ploughs, local blacksmiths their shares, local potters their utensils for cooking and carrying water, and local weavers their cotton clothing. Each village had its own oil-pressers, its own washermen, and its own barbers and scavengers. Where this system was fully developed, the duties and remuneration of each group of artisans were fixed by custom and the caste rules strictly prohibited a man from entering into competition with another of the same caste. The barber, the washerman, the blacksmith, etc.

all had their own definite circle within which they worked, and they received a regular yearly payment for their services, which often took the form of a prescriptive share of the harvest, apportioned to them when the crop had been reaped and brought to the threshing floor.

**Village sufficiency declining.**—Even in India proper the village is no longer the self-contained industrial unit which it formerly was, and many disintegrating influences are at work to break down the solidarity of village life. The rising spirit of individualism, which is the result of modern education and western influences, is impelling the classes who perform the humbler functions in the economy of village life to aspire to higher and more dignified pursuits. There is also a tendency to replace the prescriptive yearly remuneration by payment for actual work done. In many parts for instance, the village Chamar is no longer allowed the hides of dead cattle as his perquisite, but receives instead a payment for removing the cattle and for skinning them; and the hides are then sold to a dealer by the owner of the animal. Improved means of communication have greatly stimulated migration and the consequent disruption of the village community, and by facilitating and lowering the cost of transport of commodities, have created a tendency for industries to become localised. The extensive importation of cheap European piecegoods and utensils, and the establishment in India itself of numerous factories of the western type, have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture. The extent to which this disintegration of the old village organisation is proceeding varies considerably in different parts. The change is most noticeable in the more advanced provinces, whereas in comparatively backward tracts, like Central India and Rajputana, the old organisation remains almost intact.

**Agriculture.**—India is pre-eminently an agricultural country. Of its total population 72 per cent. are engaged in pasture and agriculture, viz., 69 per cent. in ordinary cultivation and 3 per cent. in market gardening, the growing of special products, forestry and the raising of farm stock and small animals. The 217 million persons supported by ordinary cultivation comprise nearly 8 million landlords, 167 million cultivators of their own or rented land, over 41 million farm servants and field labourers and less than a million estate agents and managers and their employees.

On the average, in the whole of India, every hundred cultivators employ 25 labourers, but the number varies in the main provinces from 2 in Assam, 10 in the Punjab, 12 in Bengal and 16 in the United Provinces to 27 in Burma, 33 in Bihar and Orissa, 40 in Madras, 41 in Bombay and 59 in the Central Provinces and Berar. These local variations appear to be independent alike of the fertility of the soil and of the density of population. The conclusion seems to be that the differences are due to social, rather than economic, conditions, and that those provinces have most field labourers which contain the largest proportion of the depressed castes who are hereditary agrestic serfs.

Of the two million persons supported by the growing of special products rather more than half were returned in tea, coffee, cinchona, indigo, etc., plantations and the remainder in fruit, vegetable, betel, vine, arecanut, etc., growers. Of those in the former group, nearly nine-tenths were enumerated in the tea-gardens of Assam (675,000) and Bengal (248,000) and most of the remainder in the coffee, tea, rubber and other plantations of Southern India.

Of the 16 persons per mille who were classed under Raising of farm stock, nearly four-fifths were herdsmen, shepherds, and goatherds, rather more than one-seventh were cattle and buffalo-breeders, and keepers and one-eleventh sheep, goat and pig breeders.

**Fishing and Hunting.**—In the whole of India about 2 million persons, or 6 per mille subsist by fishing and hunting. Of these, all but a small fraction are fishermen. About half the total number are found in the two provinces of Bengal (644,000) and Madras (313,000). The number who live by this occupation is exceptionally small in the United Provinces (38,000) and Punjab (10,000). The Punjab Superintendent says that, owing to the destruction of immature fish and fry and the obstruction of the free passage of fish to their spawning grounds, the five thousand odd miles of large rivers and major canals in his Province probably produce less food than an equal volume of water in any other part of the world. The sea fisheries of India, though now known to be very valuable, are at present but little exploited.

**Mines.**—In the whole of India only 530,000 persons or 17 in every ten thousand are supported by the extraction of minerals. Coal mines and petroleum wells account for about half the total number (277,000). The coal fields of Bihar and Orissa support 127,000 persons and those of Bengal 115,000. In the Manbhum district, which contains the Jherria, and part of the Raniganj coal field, 111,000 persons or 7 per cent. of the inhabitants are supported by work in the collieries. Though the Raniganj coal field was discovered as far back as 1774 many years elapsed before much use was made of the discovery. In 1840 the total quantity of coal sent to Calcutta was only 36,000 tons. It rose to 220,000 tons in 1858 and to six million tons in 1901. Since then the growth has been very rapid. The output in 1911 from the coal mines of Bengal and Bihar and Orissa exceeded eleven million tons. In the same year the total yield for all India was twelve million tons. Of the latter quantity nearly one million tons were exported, and four million were used by the railways. The total output however is still trivial compared with that of the United Kingdom, which amounted in 1911 to 272 million tons. Most of the persons employed in the mines of Bengal and Bihar and Orissa are aboriginal or quasi-aboriginal; about half are Bauris and Santals, and many of the remainder belong to the Bhuiya, Chamar or Mochi, Kora, Rajwar, Dosadh and Musahar castes. The great majority are recruited locally. The coal mines of Hyderabad, Assam, the Central Provinces and Berar, and the Punjab support between them only about 27,000 persons.

**Metals.**—Of the 98,000 persons supported by mining for metals, more than half were returned

in the Mysore State, and of these the great majority were employed in the gold mines of Kolar, where for some years past the value of the gold produced has been about £2,000,000 per annum. The mines in the Central Provinces and Berar, which support 21,000 persons, are principally for the extraction of manganese. The mining of this ore was greatly fostered by the Japanese War, which caused Russia to discontinue her exports of it for the time. There has since been a period of depression, which seems now to have come to an end. Manganese is extracted elsewhere also, e.g., in Mysore and Madras. In Burma tin and lead are extracted as well as silver and wolfram in small quantities. Iron ore is worked in various places, but chiefly in Mayurbhanj which supplies the raw material for Messrs. Tata and Company's ironworks at Sakchi.

Of the 75,000 persons supported by work in quarries and mines for non-metallic minerals, other than coal and salt, two-fifths were enumerated in Bombay, where the quarrying of stone and limestone is an important business chiefly in the neighbourhood of Bombay city. In Bihar and Orissa and Madras mica mining is of some importance.

The extraction of salt and saltpetre supports 78,000 persons. Nearly a third of the total number are found in Bihar and Orissa where the Nuniyas are still largely employed in digging out and refining saltpetre. This industry is carried on also in the Punjab. Rock salt is mined in the same province and in Rajputana.

The total number of persons employed in the extraction of minerals has risen during the decade from 235 to 517 thousand. The most noticeable increase is in Coal mines and petroleum wells which embrace nearly three times as many persons as in 1901. The bulk of the increase has occurred in Bengal and Bihar and Orissa, but it is to be noted that Hyderabad and the Central Provinces and Berar which now contribute about 12,000 persons to this group gave practically none ten years previously. Miners for metals are 21 times as numerous as they were in 1901.

**Industries.**—Of the 35·3 million persons dependent on industrial occupations, nearly one-fourth, or 2·6 per cent. of the total population, are supported by textile industries. Of these, the most important, from a numerical point of view, are industries connected with cotton. The number of persons supported by cotton spinning, sizing and weaving is close on 6 millions, and another half million are employed in ginning, cleaning and pressing the raw material. The proportion of the population supported by cotton spinning, sizing and weaving is 37 per mille in the Punjab, 29 in Bombay and Rajputana, 27 in Madras, 22 in the Central Provinces and Berars and 18 in the United Provinces. In Burma, Bihar and Orissa, Bengal and Assam it is much smaller, ranging only from 8 to 11 per mille. Nearly two-fifths of a million persons are supported by rope, twine and string making, and more than a third of a million by jute spinning, pressing and weaving. Other important textile industries are wool spinning and weaving, silk spinning and weaving, and dyeing and printing, etc., each of which supports from a quarter to a third of a million persons. It is clear there-

fore that so far as India is concerned, in spite of the growing number of cotton mills in the Bombay Presidency and elsewhere, the hand industry still, to a great extent, holds its own. Only 13,000 persons are employed in silk spinning and weaving factories, 7,000 in woollen factories including those for the making of carpets and even smaller numbers in other factories of this class. Some of these textile industries are very local. Those connected with jute are practically confined to Bengal, in which province nine-tenths of the persons supported by them were enumerated. More than half the persons dependent on rope, twine and string making and on working in 'other fibres' chiefly coir, and palmyra fibre were enumerated in Madras and its Native States and a quarter of those supported by wool industries in Hyderabad. Half the silk spinners and weavers are found in two provinces, Bengal and Madras. The dyeing, bleaching and printing of textiles and lace, crape and similar industries are almost unknown in Assam, Bengal, Burma and the Central Provinces and Berar.

**Growth of Industry.**—As compared with 1901 there has been a decrease of 6·1 per cent. in the number of persons supported by textile industries. This is due mainly to the almost complete extinction of cotton spinning by hand. Weaving by hand has also suffered severely from the competition of goods made by machinery both in Europe and in this country. There has been a large increase in the number of Indian cotton mills, but as the output per head in factories is far greater than that from hand-loom, the addition of a given number of factory hands involves the displacement of a far larger number of hand workers.

**Hides**—As compared with 1901, a large decline in the number returned as general workers in hides is partly compensated for by an increase in shoe, boot and sandal makers. In the two heads taken together there has been a drop of about 6 per cent. During the same period the number of hide dealers has more than doubled. Owing to the growing demand for hides in Europe and America and the resulting high prices, the export trade in hides has been greatly stimulated. The local cobbler, on the other hand, having to pay more for his raw material and feeling the increasing competition of machine-made goods has been tempted to abandon his hereditary craft for some other means of livelihood, such as agriculture or work in factories of various kinds.

**Woodworkers**—Wood cutting and working and basket making support 2·5 and 1·3 million persons, respectively, or 3·8 million in all. The number of factories devoted to these industries is still inconsiderable. Saw mills and timber yards each employ some 12,000 persons and carpentry works about 5,000. There is only one cane factory with 46 employees.

**Metal workers.**—The workers in metals are only about half as numerous as those in wood and cane. About three-quarters of the persons in this order are general workers in iron, and one-seventh are workers in brass, copper and bell-metal.

The total number of persons dependent on metal industries shows a decline of 6·6 per cent. as compared with 1901.

**Earthenware**—The manufacture of glass, bricks, and earthenware supports in all 2·2 milli-

on persons. Seven-eighths of these are the ordinary village potters who make the various earthenware utensils for cooking and storing water which are required by the poorer classes, as well as tiles, rings for wells and the like. In most parts of India the potter, like the carpenter, oil-presses, blacksmith and cobbler, is found in practically every village.

**Chemicals.**—In a country like India, whose economic development is still backward, it is not to be expected that a large number of persons should be engaged in industries connected with chemical products. The total number returned as supported by these industries exceeds a million but it shrinks to less than 100,000 if we exclude manufacture and refining of vegetable and mineral oils. The 1·1 million persons included in this group are almost entirely village artisans who extract oil from mustard, linseed, etc., grown by their fellow villagers.

**Food Industries.**—Of the 3·7 million persons supported by food industries the great majority follow occupations of a very primitive type. Rice pounders and huskers and flour grinders number 1·6 million, grain parchers, etc., 0·6 million, and toddy drawers about the same. There are 352,000 butchers, 281,000 sweetmeat makers, etc., and 97,000 bakers and biscuit makers. The other five heads of the scheme contain between them only 227,000 persons. The principal factories in connection with food industries are flour and rice mills, which employ 42,000 persons, sugar factories 8,000, opium, ganja and tobacco factories 7,000 and breweries 5,000.

**Dress.**—In all 7·8 million persons are supported by industries of dress and the toilet. Of these 1·3 millions are grouped under the head tailors, milliners, dressmakers, etc., and 2·1 million under each of the heads (a) shoe, boot and sandal makers, (b) washermen, cleaners and dyers, and (c) barbers, hair-dressers and wig-makers.

**Transport.**—Transport supports about five million persons, or 16 per mille of the population, viz., transport by water one million, transport by road 2·8 million, transport by rail one million, and the post, telegraph and telephone services 0·2 million. Transport by water, about three-fifths are owners of country boats and their boatmen; nearly one-sixth are employed on inland steamers and ocean-going vessels of all kinds, one-sixth are engaged in the construction and maintenance of canals, and one-twentieth in the management and upkeep of harbours. Transport by road includes one million carters and cart-owners, more than half a million porters and messengers and considerably less than that number of owners and drivers of pack animals. Palki owners and bearers number 202,000 and persons engaged on road construction and maintenance 563,000.

**Trade.**—The number of persons dependent on trade for their livelihood is 17·8 millions, or 6 per cent. of the population. Of these, more than half are supported by trade in food stuffs, including 2·9 million grocers and sellers of vegetable oil, salt and other condiments, who are for the most part the petty village shop-keepers, commonly known as salt and oil sellers; 2·2 million grain and pulse dealers; 1·6 million betel leaf, vegetables and fruit sellers, and nearly a million fish vendors. Trade in textiles is the

next most important item, supporting 4 per mille of the population. In connection with these figures, it is necessary to draw attention to the great difference which exists between the economic conditions of India and those of Europe. In Europe the seller is almost invariably a middleman, whereas in India he is usually the maker of the article, and is thus classified under the industrial and not the commercial head.

**Professions.**—The public administration and the liberal arts support 10·9 million persons or 35 per mille, namely, public force 2·4 million, public administration 2·7 million, the professions and liberal arts 5·3 million, and persons of independent means about half a million. The head Public force includes the Army (0·7 million), the Navy (less than 5,000) and the Police (1·6 million). India has practically no navy and her army is exceptionally small, as compared with those of European countries. The number of persons actually employed in it is only 384,000 or 1 per mille of the population, as compared with 4 per mille in England and 10 in Germany. The figures for Police include village watchmen and their families. The real number in this group is greater than that shown in the census tables; many of these village officials have other means of subsistence, and the latter were sometimes shown as their principal occupation. Under the head Public administration are classed only those persons who are directly engaged in the Executive and Judicial administration and their establishments, whether employed directly under Government or under a municipality or other local body. Employees of Government and local bodies who have a specific occupation of their own, such as doctors, printers, school-masters, land surveyors, etc., are shown under the special heads provided for these occupations. Of the 5·8 million persons supported by the professions and liberal arts, Religion accounts for rather more than half, Letters and the arts and sciences for more than a sixth, Instruction and Medicine for one-eighth, and Law for one-eighteenth. The main head Religion contains 1·6 million priests, ministers, etc., 0·7 million religious mendicants, 0·4 million pilgrim conductors, circumciser and persons engaged in temples, burial or burning ground service, and 0·06 million catechists and other persons in church and mission service. Of Law, more than half are lawyers, law agents and mukhtiaars and the remainder lawyers' clerks and petition writers. More than two-thirds of the persons under the Medical head are medical practitioners of various kinds, including dentists: the remainder are midwives, vaccinators, compounders, nurses, etc. The real number of persons who act as midwives must exceed considerably that shown in the return. This service is usually performed by the wife of the village scavenger or other person of low caste; and she must often have been returned under her husband's occupation. Nearly three-fourths of the persons classed under Letters and the arts and sciences are found in Music composers and masters, players on musical instruments, singers, actors and dancers. The bulk of these are village drummers, whose services are invariably requisitioned on the occasion of marriages and religious festivals.

**Factories.**—There are in the whole of India 7,113 factories employing 2·1 million persons, or 7 per mille of the population. Of these per-



sons, \$10,000, or two-fifths of the total number are employed in the growing of special products, 558,000 in textile industries, 224,000 in mines, 125,000 in transport, 74,000 in food industries, 71,000 in metal industries, 49,000 in glass and earthenware industries, the same number in industries connected with chemical products and 45,000 in industries of luxury. Of the special products, tea (703,000 employees) is by far the most important. The number of tea gardens is not much more than double that of coffee plantations, but twelve times as many persons are employed on them. The coffee plantations are four times as numerous as indigo concerns and employ twice as many labourers. Of the labourers on tea gardens, 70 per cent. are returned by Assam and 27 per cent. by Bengal. Madras, Mysore and Coorg contain between them practically all the coffee plantations, and Bihar and Orissa all the indigo factories. Of the persons working in mines, 143,000, or 61 per cent. are found in collieries, eight-ninths of them being in the two provinces of Bihar and Orissa and Bengal. The number of persons engaged in gold mines is about one-fifth of the number in the coal mines: nine-tenths of them were returned from Mysore. Of the 558,000 workers, in textile industries, cotton mills contribute 308,000 and jute, hemp, etc. 222,000. About two-thirds of the persons employed in cotton mills are found in the Bombay Presidency, from 8 to 9 per cent. in the Central Provinces and Berar and Madras, and about half this proportion in the United Provinces and Bengal. Jute mills are a monopoly of Bengal. Of the industries connected with transport, railway workshops are by far the most important and afford employment to 90,000 persons, or 79 per cent. of the total number of persons engaged in these industries: about one-fourth of them are found in Bengal and one-sixth in Bombay. Of the factories connected with food industries, the most prominent are rice and flour mills. These employ 42,000 persons, of whom nearly three-fourths are engaged in the rice mills of Rangoon and other places in Burma.

**Indians and Europeans.**—The proportion of Indians to Europeans varies considerably in different classes of factories. The great majority of the larger concerns are financed by European capital, and in such cases management or direction is generally European, and the Indians shown under this head are engaged for the most part on supervision and clerical work. In Assam where 549 tea gardens are owned by Europeans and 60 by Indians, there are 538 European and 73 Indian managers. In the coffee plantations of Madras and Mysore the same principle is apparent. The jute mills of Bengal are financed by European capital and the managers are all Europeans; while in

Bombay where Indians own 110 of the cotton spinning and weaving mills, and share 26 with Europeans, and the latter own exclusively only 12, all but 43 of the managers are Indians. Sometimes the proportion of Europeans employed in supervision, etc., varies with the character of the work. In the gold mines where the planning and control of the deep underground workings require a high degree of skill, Europeans outnumber Indians in the ratio of nearly 4 to 1, whereas in the collieries Indians are twelve times as numerous as Europeans.

**Anglo-Indians.**—Anglo-Indian is used at the census as the designation of the mixed race, descended usually from European fathers and Indian mothers, which was formerly known as Eurasian. The total number of persons returned under this head, excluding Feringis, is now 103,451 or 15 per cent. more than in 1901. Anglo-Indians are most numerous in Madras (26,000) and Bengal (20,000). In the United Provinces, Bombay and Burma the number ranges from 8 to 11 thousand, and in Bihar and Orissa, the Central Provinces and Berar and the Punjab it is about 3,500. In the States and Agencies Anglo-Indians aggregate only 14,000, more than half being found in Mysore and Hyderabad. The increase in their number as compared with 1901 may be due partly to some Anglo-Indians having returned themselves under their new designation who would have claimed to be Europeans if Eurasian had been the only alternative and it is also perhaps due in part to a growing tendency amongst certain classes of Indian Christians to pass themselves off as Anglo-Indians. The Punjab Superintendent accounts in this way for the greater part of the increase of 42 per cent. in the number returned as Anglo-Indians in his province. The proportional increase is also large in the United Provinces, Bombay, Burma, the Central Provinces and Berar and the Cochin State. Although Madras still has the largest number of Anglo-Indians, the total is slightly less now than it was twenty years ago. Possibly this is because more careful enumeration has reduced the number of Indian Christians who thus returned themselves. The number of Anglo-Indians in Burma is remarkably large in view of the comparatively short time that has elapsed since it became a British possession and the strength of its European population. In this community there are 984 females per thousand males, or slightly more than the corresponding proportions in the general population of India. More than half of the persons returned as Anglo-Indians are Roman Catholics, and one-third are Anglicans; the number of Presbyterians, Baptists, and Methodists ranges from 2 to 2½ per cent.

# The School of Oriental Studies.

This School was established by Royal Charter in June 1916. The purposes of the School (as set out in the Charter) are to be a School of Oriental Studies in the University of London to give instruction in the languages of Eastern and African peoples, Ancient and Modern, and in the Literature, History, Religion, and Customs of those peoples, especially with a view to the needs of persons about to proceed to the East or to Africa for the pursuit of study and research, commerce or a profession, and to do all or any of such other things as the Governing Body of the School consider conducive or incidental thereto, having regard to the provision for those purposes which already exists elsewhere and in particular to the co-ordination of the work of the School with that of similar institutions both in this country and in our Eastern and African Dominions and with the work of the University of London and its other Schools.

The aims of the School may be summarized briefly as follows. (i) To provide a great University centre for Oriental and African studies and research, (ii) to provide training in Languages, Literature, History, Religions, and Customs, for military and civil officers of Government and for any other persons about to proceed to Africa and the East for commercial or other enterprises.

The School has been created as the outcome of the Reports of two Government Committees, the first a Treasury Departmental Committee presided over by Lord Reay, the second an India Office Departmental Committee presided over by Lord Cromer. The School is intended to provide London with a centre for Oriental teaching adequate to the needs of the metropolis and of the Empire, and one that will remove the reproach that London has hitherto been without an Oriental School comparable to those of Paris, Berlin, and Petrograd.

The initial scheme of teaching of Modern Oriental Languages recommended by Lord Reay's Committee for the School is as follows

Group I—NEAR EAST *Turkish, Arabic and Persian*—One Professor, two Readers, three Native Assistants

Group II—NORTHERN AND EASTERN INDIA *Hindi and Hindustani and Bengali*—One Professor, one Reader, two Native Assistants

Group III—WESTERN INDIA *Marathi and Gujarati*—One Professor, one Reader (or two Readers), two Native Assistants

Group IV—SOUTHERN INDIA *Tamil and Telugu and Kanarese*—One Professor, one Reader, three Native Assistants

Group V—FURTHER INDIA, MALAY ARCHIPELAGO, ETC. *Burmese*—One Reader, one Native Assistant *Malay*—One Reader one Native Assistant.

Group VI—FAR EAST *Chinese*—One Professor, one Native Assistant *Japanese*—One Professor, one Native Assistant.

Group VII—AFRICA *Swahili*—One Reader, one Native Assistant *Hausa*—One Reader, one Native Assistant.

The Reay Committee further recommended that £1,000 a year should be spent in teaching the following languages or groups of languages, Armenian, Assamese, Panjabi, Tibetan, Pashto, Sinhalese, Siamese, Melanesian languages, Polynesian languages, Amharic, Luganda, Somali, Yoruba, Zulu. The Committee also recommended that provision should be made in the School for the teaching of classical Oriental studies, e.g., Sanskrit and Pali. Not only the languages, but the history, customs, and religions of the peoples who speak them will be taught in the School.

The Governing Body are negotiating with the University of London for the transfer to the School of the Oriental teaching hitherto provided at University and King's Colleges.

The School possesses noble and adequate buildings, provided for them by Government under the London Institution (Transfer Act of 1912). The sum of £25,000 required for the alteration and extension of the buildings of the London Institution for the purposes of the School was voted by Parliament. The School buildings are quiet, although they are in the heart of the City. They are only two minutes' walk from the termini of the Great Eastern and Central London Railways and from Moorgate Street Station on the Metropolitan Railway, and about six minutes' walk from the Bank of England.

**Finances.**—An appeal for an endowment fund was issued in October, 1916, which states that The Berlin School of Oriental Languages had, before the War, an income of £10,000. The income required for the School in London, of which the scope is necessarily more extended, is £14,000. Of this sum the School has at present in view an income of about £7,500, including grants from the Imperial Government and the Government of India. The Committee desire to raise an Endowment Fund of £150,000 for this purpose, towards which they have as a result of a preliminary appeal (which was suspended in August, 1914), about £10,000.

Patron, H. M. the King. Chairman of the Governing Body, Sir John Hewitt. Honorary Secretary, P. J. Hartog, Esq.

## Prices and Wages.

The wholesale prices of country produce in India at the end of the official year 1915-16 compared with the prices prevailing at the end of the year ending March 1915, showed no great increases, except in regard to raw jute and raw cotton—the two Indian staples which were so seriously affected immediately after the outbreak of war. The average price of wheat in India, which had increased with such rapidity during the months of January and February 1915, declined after Government intervention, and the fall continued, with slight fluctuations, till the end of March 1916, when the average price was actually 5 per cent. lower than the price that ruled before the war, and 21 per cent. below that which prevailed in the corresponding period of the previous year. The average price of rice in March 1916 remained the same as in March 1915, although during the months, September to November 1915, the price was considerably higher than in the corresponding months of the previous year. The price in March 1916 was 12 per cent. below the pre-war rate. Of the inferior food-grains, the average price of maize declined most, being as much as 25 per cent. below last year's prices, while the average prices of jawar, barley and bajra declined by 9 per cent., 5 per cent. and 2 per cent., respectively. Gram fell 18 per cent. and dal (arhar) 7 per cent. below the price that ruled a year ago. Among oilseeds, linseed showed a slight rise of 3 per cent. owing to scarcity of stocks and supplies in the market, and rape and mustard showed no fluctuation, but sesa-

mum declined by 5 per cent. As already stated, it was only in raw jute, owing to the demand for war bags, etc., and raw cotton, owing to good demand on the part of spinners, that prices recorded a marked upward movement. Raw jute rose 25 per cent. and raw cotton 39 per cent. as compared with the prices of the corresponding period of the previous year. The prices, however, of raw jute and raw cotton were still 17 per cent. and 5 per cent., respectively, below the pre-war rates. Among imported articles the rise in the price of Liverpool salt is most noticeable. The wholesale price in Calcutta at the end of March 1916 was Rs. 201 per 100 maunds, as against Rs. 105 at the end of March 1915, and Rs. 51 on the 30th July 1914. The prices of Java sugar (T.M.O. white) during the same periods were Rs. 12-6-0, Rs. 11-12-0 and Rs. 6-12-0 per maund, respectively. The rise in the price of salt was, therefore, 294 per cent. and in that of sugar 83 per cent. over the pre-war rates, and 91 per cent. and 5 per cent., respectively, as compared with prices that ruled at the end of March 1915.

### Earnings of Labour.

In 1915-16 as compared with the previous year, there were no fluctuations of importance in the earnings of labour. In cotton industry in January 1916 as compared with the corresponding period of last year, there was also no marked change in the wages, but compared with the pre-war period the rates showed an increase of 3 per cent., the rise being chiefly in the sizing and weaving departments.

### AVERAGE WAGES PAID IN SELECTED INDUSTRIES.

Industries.	Rate per	1914.	1915.	1916.
<b>Cotton—</b>				
Card Room .. .. .	Month	Rs. a p. 12 11 5	Rs. a p. 12 13 0	Rs. a p. 12 13 7
Ring-throstle Room .. .. .	"	12 0 0	12 6 8	12 6 8
Reeling Room .. .. .	"	9 8 0	9 8 0	9 8 0
Bundling Room .. .. .	"	16 0 0	16 0 0	16 0 0
Sizing Department .. .. .	"	22 12 8	23 6 10	23 6 10
Weaving Department .. .. .	"	31 0 0	33 8 0	36 0 0
Average .. .. .	"	17 3 8	17 12 0	18 0 8
<b>Wool—</b>				
Card Room .. .. .	"	17 4 2	21 9 8	15 3 4
Mule Room .. .. .	"	21 4 2	24 15 4	25 2 11
Finishing Department .. .. .	"	16 2 1	16 7 0	16 15 6
Weaving Department .. .. .	"	16 4 8	16 15 6	17 1 11
Engineering Department .. .. .	"	18 7 0	21 2 0	21 8 4
Average .. .. .	"	17 11 9	20 5 5	19 8 8
<b>Jute—</b>				
Carding .. .. .	Week	2 0 0	2 0 0	2 0 0
Revers .. .. .	"	3 4 9	3 5 1	3 4 9
Spinners .. .. .	"	3 7 2	3 7 8	3 8 0
Shifters .. .. .	"	1 12 2	1 12 10	1 12 0
Winders .. .. .	"	3 9 8	3 9 8	3 9 8
Beamers .. .. .	"	1 11 3	4 11 6	4 11 3
Weavers .. .. .	"	5 10 5	5 9 8	5 10 5
Mistries .. .. .	"	7 11 3	7 11 3	7 0 0
Coolies .. .. .	"	2 15 0	3 1 3	3 1 3
Average .. .. .	"	3 14 5	3 14 9	3 13 0

## Education.

Indian Education is unintelligible except through its history. Seen thus it affords the spectacle of a growth which, while to one it will appear as a huge blunder based on an initial error of judgment easily avoided, to another stands out as a symbol of sincerity and honest endeavour on the part of a far-sighted race of rulers whose aim has been to guide a people alien in sentiments and prejudices into the channels of thought and attitudes best calculated to fit them for the needs of modern life and western ideals. A careful survey of the history of Indian Education will reveal the opposition between two tendencies whose struggle for supremacy was finally decided by Lord Macaulay's Minute of 1835. The beginnings of public education in India belong to a generation before Macaulay's regime. But it was not till Macaulay poured such emphatic contempt on Oriental learning that the Government in India in general definitely chose the path of English education as the road to future progress. Macaulay's Minute crystallises a point of view which had already some years before begun to impress itself upon educationists in this country. And when we find a statesman of the acumen of Lord Curzon saying "Ever since the cold breath of Macaulay's rhetoric passed over the field of the Indian languages and Indian text books, the elementary education of the people in their own tongue has shrivelled and pined," we must not suppose that he regarded Macaulay as solely responsible for the trend which modern education has taken. It needs but a cursory glance at the history of education in India under British rule to make clear once for all that education on Western lines was necessary as an answer to a growing demand which none but callous rulers could refuse, as also for the very forcible reason that without some kind of organised training of Indians in English composition and ideas the practical work of administration which demands an ever-increasing number of clerical assistance to meet the needs of steadily accumulating office work, could never have been carried on. These two points give one the clue to the main features of Indian education (1) the claim of newly-awakened races to be allowed to substitute for their own lifeless learning the progressive culture of modern

Western thought; and (2) the obvious utility of a system whose object should be, in part at least, to assist Indians to a development of their capacities and sympathies on lines which might be of service in the actual government of the country. With reference to this last point the following consideration may be urged. The object of our great Universities and Public Schools in England is generally admitted to be something more than the satisfaction of purely theoretical interests. They are meant to be the training ground of capable public servants. Let us once admit this to be a necessity in England; if then we recognise the impossibility of administering the great Indian Empire through Englishmen alone, there seems to be no adequate reason for refusing to apply the same methods to India. And as there is nothing in Indian History to show the particular value of any Oriental system of education as a training for public service, the logical conclusion is that Indians should be educated in English along Western lines. If an observer were confronted with a country ruled by foreign administrators backed up by a foreign army, he would infer on a priori grounds that the said foreign power had included in its legislation a system of education analogous to its own—if his opinion of it had not led him to suppose that it had adopted the sceptical or ungenerous policy of not educating its subjects at all. That would present itself as the only possible alternative. And the problem of Indian Education may be said to resolve itself into a doubt which of the two policies is preferable, that of non-education or that of English education. Yet the doubt itself has only to be stated to be solved. And the task of explaining Indian education becomes in the end simply one of showing how the initial encouragement on the part of British rulers of Oriental learning did not so much begin education as foster the desire for education, until at last the Government undertook the duty of guiding such aspirations into what it conceived to be the right channel. To this end our aim will be to show (1) Indian education in the stage of conception, and its birth somewhere about the time of Macaulay's Minute, (2) its growth and organisation, (3) its present situation.

### THE BIRTH OF INDIAN EDUCATION.

The seeds of an interest in education may be said to have been sown by the foundation of the Calcutta Madrasa by Warren Hastings in 1781, and the Sanskrit College at Benares by Jonathan Duncan in 1791. Whatever interest there was in learning during this period was directed solely to the encouragement of Sanskrit and Arabic. Even the Act of 1813 which set apart a lakh of rupees for "the revival and promotion of literature and the encouragement of learned natives of India, and for the introduction and promotion of a knowledge of the sciences in the British territories of India" was interpreted as a scheme for the encouragement of Sanskrit and Arabic; and it was not till the famous meeting of the Gov-

ernor-General's Council in 1835 that it was definitely discussed whether it might not accord with the meaning of the Act of 1813 to use at least part of the money for the encouragement of the study of English. But other forces had been already at work. In 1817 the Hindu College was opened at Calcutta with the express object of instructing "the sons of Hindus in the European and Asiatic languages and sciences," English being assigned the most prominent position. The moving spirit which led to the foundation of this institution was Raja Ram Mohan Roy who in the words of Mr. H. B. James in his important book "Education and Statesmanship in India" "incarnates the impulse which led thinking

Indians to desire and work for English Education." From that time forward the far-sighted observer must have realised that a movement had begun which whether we would or not we could no longer check. The same phenomenon was witnessed on the Western side of India; and Mountstuart Elphinstone's *Minute on Education*, dated March 1824, deserves particular notice for its recognition of the necessity of introducing a knowledge of European sciences into any scheme of education as well as for its wise restraint in dealing with Oriental learning. For though his declared object was to establish English schools and encourage the natives in the pursuit of European sciences, he repudiates the idea that the purely Hindu side of education should be totally abandoned. In his own words: "It would surely be a preposterous way of adding to the intellectual treasures of a nation to begin by the destruction of its indigenous literature; and I cannot but think that the future attainments of the natives will be increased in extent

as well as in variety by being, as it were, engrafted on their own previous knowledge and imbued with their own original and peculiar character." Elphinstone's interest in educational matters was sufficiently appreciated by the citizens of Bombay who in 1827, the year of his departure, resolved to found two professorships in his memory "to be held by gentlemen from Great Britain until the happy period when natives shall be fully competent to hold them." It is sufficiently clear not only that an interest had been aroused in English education but that some attempts had been made to meet the interest before 1835, though Lord Curzon may have given a just estimate of the situation at the Educational Conference of Simla in 1901 when he said: "Education there was; but it was narrow in its range, exclusive and spasmodic in its application, religious rather than secular, theoretical rather than utilitarian in character. Above all, it wholly lacked any scientific organisation and it was confined to a single sex."

### GROWTH AND ORGANISATION OF ENGLISH EDUCATION IN INDIA.

It is, of course, just the possibility of engrafting modern western knowledge on the old Indian stocks that is open to doubt. Herein lies the significance of Macaulay's famous tirade on Oriental science, which deserves quoting for the contrast it forms to the juster estimate of Mountstuart Elphinstone. It is perhaps more offensive to Indian ears for the element of truth it contains, though the entirely unsympathetic form in which he expresses himself is a sufficient stumbling-block in itself. "The question before us," he writes, "is simply whether, when it is in our power to teach this language—English—we shall teach languages in which, by universal confession, there are no books on any subject to be compared to our own; whether, when we can teach European science, we shall teach systems which, by universal confession, wherever they differ from those of Europe, differ for the worse; and whether, when we patronise sound philosophy and true history, we shall countenance at the public expense, medical doctrines which would disgrace an English farmer, astronomy which would move laughter in the girls at an English boarding-school, history abounding with kings thirty feet high and reigns thirty thousand years long, and geography made up of seas of treacle and seas of butter." The reiterated phrase 'by universal confession' is beyond the mark; but Macaulay was surely right in his valuation of ancient Hindu science as science or history as history. Where he was surely wrong was in his implied condemnation of Indian literature as literature. From that point of view you might just as well condemn Homer for his mythology (as indeed Plato does in the *Republic*). Where, again, he was possibly wrong was in his vehement antipathy to the view that, if modern science is to be taught, it should be taught through the medium of Indian languages. Yet here too he represents an attitude which was fast becoming that of enlightened Indians. And, if there were no other reasons, the ultimate utility to the Government itself of Indians trained in the Eng-

lish language is a strong argument in his favour. This utilitarian motive for English education lurks often unconscious and unrecognised under the whole progress of Indian education—to its detriment as some think, for the great charge against the modern Indian student is that he regards a career in Government schools and colleges not so much as education and an end in itself as a mere means to more or less lucrative employment in Government offices. Be that as it may, we shall probably not be far wrong in saying that the famous *Minute of 1835* was in spirit right but in expression wrong. Its result was that the Government of Lord William Bentinck made the following momentous Resolution: "His Lordship in Council is of opinion that the great object of the British Government ought to be the promotion of European literature and science among the natives of India, and that all the funds appropriated for the purposes of education would be best employed on English education alone."

#### Universities Established.

Macaulay's period of service on the Committee of Public Instruction (first formed in 1824) gave considerable impetus to the movement he advocated, as figures will show. Whereas the Committee had no more than fourteen institutions under its control in Bengal when he joined it, this number was more than trebled by the end of 1837, the larger part being Anglo-Vernacular schools or colleges. Progress continued along these lines in Bengal and more slowly in other Presidencies, until in 1852 the numbers under instruction in Government colleges amounted to 25,372 of which 9,893 were for English education (James p.34). The increase of numbers must have been materially affected by a Resolution of Lord Hardinge's Government in 1844 in which it was stated that in the selection of candidates for public employment, preference would be given to those who had been educated in the newly fashioned type of institution. An adherent of the old-fashioned intellectual ideal of colleges

Statement of Educational Progress in INDIA.

	1900-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15. †
Area in square miles						
Population						
{ Male	1,145,728	1,152,894	1,135,513	1,137,686	1,137,686	1,083,390
{ Female	122,699,630	130,113,723	130,406,551	130,302,188	130,302,188	124,182,692
Total Population	119,017,938	124,706,893	124,060,002	124,851,633	124,851,633	118,806,255
Public Institutions for Males.						
Number of arts colleges	128	128	130	128	138	136
Number of high schools*	1,190	1,203	1,219	1,273	1,349	1,382
Number of primary schools	107,463	108,144	110,692	113,955	116,650	116,012
Male Scholars in Public Institutions.						
In arts colleges	22,912	24,806	29,369	32,931	38,836	41,441
In high schools	344,647	364,704	380,681	428,182	466,386	483,349
In primary schools	3,888,671	3,936,419	4,202,631	4,428,534	4,609,405	4,518,004
Percentage of male scholars in public institutions to male population of school-going age.	26.2	27.3†	28.8	28.4	29.8	30.9
Public Institutions for Females.						
Number of arts colleges	8	8	10	10	11	11
Number of high schools*	125	130	135	144	157	158
Number of primary schools	11,753	12,027	12,886	13,694	14,722	15,700
Female Scholars in Public Institutions.						
In arts colleges	217	244	279	318	353	406
In high schools	14,257	14,894	16,884	18,515	21,043	22,234
In primary schools	668,636	689,471	785,511	832,962	909,466	929,846
Percentage of female scholars in public institutions to female population of school-going age.	4.2	4.2†	4.7	5.0	5.4	5.9
TOTAL SCHOLARS in public institutions	4,826,554	4,930,084	5,233,065	5,559,841	5,823,215	5,792,417
{ Male	763,580	793,646	875,660	928,983	1,019,621	1,064,161
{ Female	5,590,134	5,733,780	6,128,725	6,488,824	6,842,836	6,816,598
Total	6,203,305	6,345,582	6,790,721	7,149,662	7,518,147	7,448,410
TOTAL SCHOLARS (both male and female) in all institutions.						
Expenditure (in thousands of rupees).						
From provincial revenues	2,34.30	2,42.08	2,69.59	3,39.25	3,64.54	4,22.72
From local funds	1,02.24	1,00.32	1,05.80	1,23.08	1,47.91	1,66.79
From municipal funds	24.56	28.00	29.84	33.28	37.86	43.51
Total Expenditure from public funds	3,61.10	3,70.40	4,05.23	4,95.61	5,50.11	6,33.02
From fees	1,85.42	2,00.67	2,19.09	2,40.52	2,66.64	2,85.63
From other sources	1,40.24	1,47.61	1,61.61	1,65.96	1,86.49	1,73.05
GRAND TOTAL OF EXPENDITURE	6,86.76	7,18.68	7,85.93	9,02.09	10,02.24	10,91.70

\* High schools include vernacular high schools also, in some provinces.

† The percentages for 1910-11, being reckoned on the new Census figures are slightly misleading for purposes of comparison with previous years. This remark applies throughout all the Tables. ‡ The statistics of Native States have been excluded from the Tables for 1914-15.

life would see in this Resolution a fatal concession to the utilitarian view and a fatal misdirection of public attitude towards education.

Meanwhile educational institutions had so multiplied throughout India that the time was becoming ripe for the decisions arrived at in Sir Charles Wood's Despatch of 1854. The old idea had been that the education imparted to the higher classes of society would gradually 'filter down' to the lower classes. How little true it is that education could ever filter down to the masses in India by its own percolative properties is evident enough even now when our wide system of schools entirely fails to touch the majority of India's population. The Despatch of 1854 marks a departure from the 'filtration' policy and a recognition on the part of an enlightened Government of educational duties, even towards sections of the population who had never entertained the idea of Government obligation in their direction. The result of the Despatch was the formation of Departments of Public Instruction on lines which do not differ at all essentially from Departments of Public Instruction of the present day. They represent a direct desertion of the *laissez faire* or filtration policy, and an attempt on the part of Government to "combat the ignorance of the people which may be considered the greatest curse of the country." Another feature of the Despatch was an outline of a 'University' system, which formed the basis of the scheme adopted in 1857 when Acts were passed for the incorporation of three Universities, one for Calcutta, one for Bombay and one for Madras. As Lord Curzon said "The Indian Universities may be described as the first fruits of the broad and liberal policy of the Education Despatch of 1854." He might have gone further and said that the scheme outlined in it not only originated universities but contained suggestions for their proper conduct whose value has only recently been understood. In its proposal of a distinction between "common degrees" and "honours" degrees it anticipates the actual procedure of at least one University, that of Bombay, by nearly sixty years.

#### Private Agencies.

The Despatch of 1854 and the orders based on it, together with later resolutions and modifications, organised education into something like the present system. Government took the whole thing into its own hands and established Universities, colleges, high schools and middle schools. Efforts were made to extend elementary education so as to reach the masses and also to establish a system of inspection with a view to guaranteeing the efficiency of private institutions which should be allowed grants-in-aid as well as Government institutions themselves. Expansion under control sums up the aims of this combined system of grants-in-aid and inspection. As Mr. James puts it: "Local management under Government inspection stimulated by grants-in-aid, was to supplement and finally, perhaps, in large measure, to supersede direct management by Government." (p. 48) The latter part of the sentence may have been the

inspiration of the Commission of 1882 appointed to inquire into the way in which the recommendations of the Despatch of 1854 had been carried out. The result of the Commission was to relax the control exercised by Government over education. Government's withdrawal was intended to refer only to secondary instruction. The idea was to encourage private enterprise in the founding of secondary schools. But though the recommendations of the Commission included much talk of conditions and cautions and of the necessity of maintaining a high standard, the addition of a further recommendation that the managers of aided schools and colleges be permitted, if they wished, to charge lower fees than Government schools of the same class led in the result to a general deterioration of standard. The recommendations of this Commission appear to some as a charter of inefficiency. They are the avenue to educational institutions run as a business proposition. Meanwhile, perhaps the most creditable feature of the Commission's Report was its insistence on the importance of Primary Education and its recommendation "that primary education be declared to be that part of the whole system of Public Instruction which possesses an almost exclusive claim on local funds set apart for education and a large claim on provincial revenues." The least creditable feature is its recommendation "that preference be given to that system which regulates the aid given mainly according to the results of examination." To pay by results is willingly to encourage the cramming institution.

#### Great Expansion.

The period from 1882 to the beginning of the new century is one of phenomenal expansion. There was a general stampede for education, and no proper regard was paid to the standard or quality of the product. It is this period which if any deserves the opprobrium incurred by education in India. And it is the universities which stand out as the chief sinners. There can be no reasonable doubt that students were being turned out with degrees attached to their names who could not be regarded as educated from any respectable standpoint. As a man who is doubtful whether an act of his really is so praiseworthy as the general chorus of congratulation had led him to suppose, suddenly, with tremors at the thought of the revision of opinion that is sure to follow if he turns out to have done wrong, feels certain of his error, so our Governors and Chancellors and Vice-Chancellors of this period gradually arrived at the conviction that something was wrong with the seemingly excellent product of the Despatch of 1854 and the Commission of 1882. Criticism began from without, but finally it invaded the sphere of Convocation addresses. At last in 1901 the Vice-Chancellor of the University of Calcutta made this statement: "For the first time, the Chancellor asks the University to consider the possibility of constitutional reform." In September of that year an educational conference was convened at Simla by the Viceroy Lord Curzon. In 1902 the Indian Universities Commission was appointed and in 1904 an Act was passed to amend the law relating to the Universities of British India.

Statement of Educational Progress in MADRAS.

	1909-10	1910-11	1911-12	1912-13	1913-14	1914-15
<b>Area in square miles</b> .. .. .	No change.	141,866	142,491	No change.	No change.	142,330
<b>Population</b> .. .. .	No change.	20,152,916	20,389,666	No change.	No change.	20,382,955
		20,770,668	21,029,264			21,022,449
		40,923,584	41,418,930			41,405,404
<b>Total Population</b> .. .. .						
<b>Public Institutions for Males.</b>						
Number of arts colleges .. .. .	30	30	30	29	34	34
Number of high schools .. .. .	172	172	168	171	176	182
Number of primary schools .. .. .	23,108	23,426	24,044	25,223	26,018	26,917
<b>Male Scholars in Public Institutions.</b>						
In arts colleges .. .. .	3,911	3,709	4,893	5,491	7,028	8,180
In high schools .. .. .	72,673	69,541	71,394	77,581	86,364	93,367
In primary schools .. .. .	739,933	766,884	823,331	889,393	952,035	999,685
Percentage of male scholars in public institutions to male population of school-going age.	30.8	29.7	30.8	33.1	35.5	37.3
<b>Public Institutions for Females.</b>						
Number of arts colleges .. .. .	1	1	2	2	2	3
Number of high schools .. .. .	31	32	33	32	35	35
Number of primary schools .. .. .	886	900	1,162	1,281	1,443	1,527
<b>Female Scholars in Public Institutions.</b>						
In arts colleges .. .. .	37	32	46	56	66	104
In high schools .. .. .	4,212	4,027	4,310	4,489	5,491	5,929
In primary schools .. .. .	147,910	156,027	199,710	223,835	248,214	265,825
Percentage of female scholars in public institutions to female population of school-going age.	6.2	6.1	6.6	7.4	8.2	8.8
<b>TOTAL SCHOLARS in public institutions</b> (Male .. .. .)	870,505	896,701	943,369	1,011,753	1,085,548	1,140,713
	181,461	190,861	209,517	234,197	259,708	277,187
<b>Total</b> .. .. .	1,051,966	1,087,562	1,152,886	1,245,950	1,345,256	1,417,840
<b>TOTAL SCHOLARS (both male and female) in all institutions.</b>	1,179,048	1,215,725	1,250,065	1,362,182	1,449,943	1,542,955
<b>Expenditure (in thousands of rupees).</b>						
From provincial revenues .. .. .	39.07	43.16	44.22	53.20	65.69	66.71
From local funds .. .. .	11.45	11.24	12.28	17.27	(a) 23.91	† 29.20
From municipal funds .. .. .	3.17	8.21	3.15	4.15	(b) 5.63	† 8.50
<b>Total Expenditure from public funds</b> .. .. .	53.69	57.61	59.65	74.62	95.26	1,04.41
From fees .. .. .	34.89	27.29	37.90	41.44	46.06	50.91
From other sources .. .. .	30.81	32.78	38.10	36.56	38.67	38.21
<b>GRAND TOTAL OF EXPENDITURE</b> .. .. .	119.39	117.68	135.65	157.62	179.90	193.53

\* Include also vernacular high schools for girls.

(a) Includes provincial contribution of Rs. 13,07,994.

(b) Includes provincial contribution of Rs. 1,62,669.



## UNIVERSITIES ACT AND PRESENT SITUATION.

The Commission of 1882, which favoured the policy of withdrawing higher education from the control of Government within certain limits and of allowing colleges and secondary schools conducted by private enterprise to reduce their fees, though in many details it made admirable proposals, yet by its general policy led to a general inefficiency and lowering of standard in higher education. In some matters it anticipated all that has hitherto been done. For example, in suggesting that there should be two sides in secondary schools, "one leading to the entrance examination of the Universities, the other of a more practical character, intended to fit youths for commercial and other non-literary pursuits," it still anticipates Government action by many years. The Universities Commission of 1902 proposed to make the School Final examination a preliminary test for certain professions and posts in Government service and to substitute it for the Matriculation as a general qualification, even, if possible, as a test of fitness to enter the University. The latest statement of Government policy (dated Feb. 1913) re-asserts and emphasises these proposals, which are an attempt to enforce the suggestion of the Commission of 1882. But the general relaxation of Government control seemed to Lord Curzon the radical evil of his day.

### New Senates.

Not to speak of the lowering of efficiency consequent on the lowering of fees in schools and colleges by private enterprise, we may mention among the more glaring defects which Lord Curzon had to face the maladministration of the Universities due to the mistake of their composition. All kinds of people had crept into the Senates of Universities who from the true educational point of view had no business there. The numbers had become unwieldy so that it was impossible to get passed even necessary reforms. The progress of education was retarded and modern innovations simply ignored. As reconstituted the Universities have revised their regulations and though they have not ceased to be examining universities they have taken upon themselves the necessary function of inspecting the colleges affiliated to them. They have also received powers of becoming teaching bodies. Little has yet been done to make them that; but it may be judged from utterances in their Senates that they are becoming increasingly conscious of their possibilities or duties in this direction. In the last Resolution on Education (Feb. 1913), it was decided that the principle of an examining and affiliating University must still be maintained. Nevertheless a movement is promised in the direction of "new local teaching and residential Universities within each of the provinces in harmony with the best modern opinion as to the right road to educational efficiency." Under the present system it is no longer impossible to pass radical changes. The Senate of each University has been reduced to one hundred or less in number; and the Act lays down that in the election of members of the syndicate, the executive body in the Uni-

versity, a certain number of those actively engaged in educational work should be selected. To quote from the Fifth Quinquennial Review—"the Colleges have defined rights of representation on the Syndicate, to this extent that among the elected members of the Syndicate a number not falling short by more than one of a majority must be heads or professors of colleges. One University has required by its regulations that a majority of the elected members of the Syndicate shall be heads or professors of Colleges." It is evident then that the working bodies in the Universities have been cleaned up and are now so constituted as to contain the obviously essential educational element.

### Policy of 1913.

The Influence of Lord Curzon on educational progress has been generally salutary. For though his reforms had the air of restriction and raised a general outcry in India—"the least that Lord Curzon was charged with was a deliberate attempt to throttle higher education in India." ("Indian Unrest" by Valentine Chirol)—it is now recognised by enlightened thinkers that all branches of education required careful review. Before any quantitative increase took place, it was necessary to reform the qualitative basis. A glance at the work done as summarised by the last Quinquennial Review will show how the machinery has been cleaned. The Universities are now respectable; secondary schools have been improved and placed under stricter conditions of recognition; attention, though insufficient, has been paid to the training of teachers; in primary schools examinations have been simplified, buildings improved, the pay of teachers raised, the courses of studies revised and widened. In these circumstances the Government Resolution of 1913 was justified in its aims to extend educational institutions on every side. It proposed to double the number of primary schools (a scheme which may be regarded as a compromise between the policy of *laissez faire* and that of compulsory education), and to encourage the establishment of a greater number of secondary schools on the lines of private enterprise by increased grants on conditions of submission to Government inspection, recognition, and control. One of the most interesting features of the Resolution is Government's desire to develop the hostel system. In the words of the Resolution: "The Government of India desire to see the hostel system develop until there is adequate residential accommodation attached to every college and secondary school in India." Altogether the Resolution of February 1913 ranks as a notable pronouncement, ranging as it does over every conceivable topic, from the Universities to what is often called Female Education, with a depth of insight and a readiness to face the most complex problems of finance and organisation that augurs well for educational progress. There is reason to hope that our educational system in India will stand out as one of the most remarkable achievements in the history of imperial politics.

Statement of Educational Progress in BOMBAY.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
Area in square miles .. .. .	No change.	188,826	188,826	No change.	No change.	123,070
Population .. .. .	{	14,008,375	14,013,322	{		10,352,255
	{	13,071,573	13,074,273	{		9,430,994
		27,078,048	27,087,795			19,683,249
<i>Public Institutions for Males.</i>						
Number of arts colleges .. .. .	11	11	11	11	10	7
Number of high schools .. .. .	114	117	129	138	141	110
Number of primary schools .. .. .	10,846	11,267	11,609	12,169	12,790	9,929
<i>Male Scholars in Public Institutions.</i>						
In arts colleges .. .. .	2,938	3,177	3,643	3,850	4,604	3,881
In high schools .. .. .	37,707	39,369	41,325	45,385	47,427	37,600
In primary schools .. .. .	580,927	593,197	630,427	678,031	701,406	551,987
Percentage of male scholars in public institutions to male population of school-going age.	33.2	31.9	33.6	36.2	37.6	40.4
<i>Public Institutions for Females.</i>						
Number of arts colleges .. .. .	26	24	27	30	32	31
Number of high schools .. .. .	1,104	1,121	1,154	1,199	1,271	1,057
Number of primary schools .. .. .						
<i>Female Scholars in Public Institutions.</i>						
In arts colleges .. .. .	76	81	76	91	93	94
In high schools .. .. .	2,829	2,987	3,662	4,063	4,451	4,485
In primary schools .. .. .	109,806	112,105	126,703	136,378	146,210	119,989
Percentage of female scholars in public institutions to female population of school-going age.	8.3	6.1	6.9	7.4	8.0	9.2
<b>TOTAL SCHOLARS in public institutions</b>						
Male .. .. .	653,704	667,489	707,328	781,435	790,303	620,864
Female .. .. .	116,731	119,596	134,981	145,392	156,019	129,738
Total .. .. .	770,435	787,085	842,309	906,827	946,322	750,602
<b>TOTAL SCHOLARS (both male and female) in all institutions.</b>	850,293	868,335	922,877	987,685	1,029,017	789,709
<i>Expenditure (in thousands of rupees).</i>						
From provincial revenues .. .. .	49.04	46.60	53.98	68.82	70.54	82.08
From local funds .. .. .	10.34	10.84	10.76	11.62	9.48	9.34
From municipal funds .. .. .	7.50	9.54	10.14	9.85	10.43	11.16
Total Expenditure from public funds .. .. .	66.88	68.98	74.88	90.29	90.60	1,02.57
From fees .. .. .	23.96	24.49	26.27	26.36	29.31	27.25
From other sources .. .. .	52.68	31.53	35.02	36.83	39.42	24.06
<b>GRAND TOTAL OF EXPENDITURE .. .. .</b>	1,23.52	1,24.00	1,36.17	1,53.48	1,59.58	1,56.87

### University Organisations

These Universities are examining bodies with colleges affiliated to them. The Governor-General is the Chancellor of the University of Calcutta and the head of the provincial Government the Chancellor of each of the other Universities. The Vice-Chancellor is nominated by each head of Government. The executive body is the Syndicate which is now organised so as to contain a larger educational element. Over this body the Vice-Chancellor presides, all other members being elected by the various Faculties except the Director of Public Instruction who is a member *ex officio*. The secretarial work of all university business is done by an officer appointed by the Senate, the Registrar. The legislative body is the

Senate which is divided into faculties, a Faculty being a section of the Senate appointed to control the work of a particular subject. The Faculties are in most cases those of Arts; science, law, medicine and engineering. There is an Oriental Faculty in the Punjab-University alone. Each of the main branches of study in a University is represented in addition by a Board of Studies, that is, an advisory body whose duties are to look after the curricula and recommend text books or books which represent the standard of knowledge required in the various examinations. The Senate as a whole consists of from 75 to 100 members, the majority of whom are nominated by Government, the remainder being elected by the Senate or its faculties or by the body of graduates of the University.

### UNIVERSITIES.

**Constitution.**—There are in British India five Universities with the following territorial limits (Sixth Quinquennial Review, p. 207.)—

University.	Territorial Limits.	
	Province (including any Native State under its political control and any foreign possession included within its boundaries).	Native State or Colony.
Calcutta	Bengal, Burma, Assam, Bihar and Orissa.	
Madras	Madras and Coorg	Hyderabad, Mysore and Ceylon.
Bombay	Bombay and Sind	Baroda.
Allahabad	United Provinces of Agra and Oudh, the Central Provinces (including Berar) and Ajmer-Merwara.	The States included in the Rajputana and Central India Agencies.
Punjab	Punjab, North-West Frontier Province and British Baluchistan.	Kashmir and Baluchistan.

### Courses and Examinations.

The Matriculation Examination is the test for entrance to a University. After matriculation, if the student decides to graduate in Arts, he must take a four years' course. After two years he takes the Intermediate Examination. After another two years he may appear for the Examination for Bachelor of Arts. The regulations with regard to Honours vary in the different Universities. In Calcutta the honours and pass courses are separate. In Bombay the honours student takes in addition to the pass three extra papers. In Madras the honours course is taken the year after and in addition to the pass course. The degree of Master of Arts requires a further examination (except in Madras) which is taken one or two years after the examination for the B. A. degree. If the student elects to take science, his course is one of four years. In some Universities he receives the degree of B. A.; in others a separate degree of B. Sc. Where the separation between Arts and Science is clearly defined, the student takes the Inter-

Examination in Science two years after Matriculation, and two years after this examination appears for that of B.Sc. Those students who choose a professional course, e.g., agriculture, medicine or engineering, must in most cases first attend an Arts College for one or two years before proceeding to the professional college. The student who has graduated as Bachelor at a University can graduate as a Bachelor of Law in two years.

The annual output of graduates is reckoned in the Sixth Quinquennial Review at 2742, and the proportion of students who graduate in the four main faculties is given as follows:—

Arts	85%
Science	20%
Medicine	0%
Engineering	4%

But it should be remembered that in some universities the Arts degree is given for Science subjects.

Statement of Educational Progress in BENGAL.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
Area in square miles .. .. .	124,492	124,492				
Population .. .. .	26,124,820	27,436,187				
.. .. . { Male .. .. .	26,545,049	27,587,153				
.. .. . { Female .. .. .	52,669,869	55,023,340				
Total Population .. .. .						
<i>Public Institutions for Males.</i>						
Number of arts colleges .. .. .	29	29	29	31	31	31
Number of high schools .. .. .	395	399	398	532	570	599
Number of primary schools .. .. .	35,201	35,437	36,342	28,107	27,470	28,335
<i>Male Scholars in Public Institutions.</i>						
In arts colleges .. .. .	7,107	8,255	9,635	12,701	14,638	15,808
In high schools .. .. .	87,172	91,544	103,086	164,244	182,645	192,082
In primary schools .. .. .	992,103	997,953	1,017,769	999,110	982,610	999,112
Percentage of male scholars in public institutions to male population of school-going age.	32.0	31.4	33.2	40.9	41.4	42.3
<i>Public Institutions for Females.</i>						
Number of arts colleges .. .. .	3	2	3	2	3	3
Number of high schools .. .. .	17	21	19	21	26	28
Number of primary schools .. .. .	2,035	2,052	3,124	6,788	7,098	7,627
<i>Female Scholars in Public Institutions.</i>						
In arts colleges .. .. .	47	63	81	105	113	113
In high schools .. .. .	2,046	2,301	2,423	3,090	3,653	3,764
In primary schools .. .. .	145,233	146,223	155,616	205,784	210,137	225,130
Percentage of female scholars in public institutions to female population of school-going age.	4.2	4.2	4.6	6.8	7.1	7.6
TOTAL SCHOLARS in public institutions (Male .. .. .	1,254,914	1,290,621	1,464,946	1,435,452	1,452,313	1,483,843
(Female .. .. .	167,505	173,207	189,371	227,313	235,434	253,124
Total .. .. .	1,422,419	1,463,828	1,554,317	1,662,765	1,687,747	1,736,967
TOTAL SCHOLARS (both male and female) in all institutions.	1,475,376	1,518,239	1,669,360	1,718,623	1,747,608	1,799,889
<i>Expenditure (in thousands of rupees).</i>						
From provincial revenues .. .. .	49.93	50.16	54.70	64.97	64.99	87.03
From local funds .. .. .	11.36	11.64	11.64	15.88	22.23	24.34
From municipal funds .. .. .	1.41	1.58	1.70	1.56	1.70	1.68
Total Expenditure from public funds .. .. .	62.70	63.38	68.10	82.41	88.92	113.05
From fees .. .. .	32.00	31.02	37.88	86.62	95.50	104.77
From other sources .. .. .	56.19	36.31	36.04	33.68	36.35	36.52
GRAND TOTAL OF EXPENDITURE .. .. .	150.89	160.71	172.02	202.71	220.77	254.34

### Dacca University.

One of the most interesting features of the latest Government Resolution on education is the decision to found a teaching and residential university at Dacca. Government also profess themselves willing to sanction under certain conditions the establishment of similar universities as occasion may demand. An act constituting the University at Benares was passed by the Imperial Council last year. These experiments may be regarded as an attempt to get away from the affiliating and examining type of University and to conform to that ideal of a University which requires it not only to confer degrees but to supervise the training of intellect and character as closely as possible. A University of this type will turn out graduates who may be trusted to have in their degree satisfactory credentials about their general character and ability. Under the existing system the University turns out graduates of whom it knows absolutely nothing beyond what it learns in examinations.

### Colleges.

Affiliated to the University are colleges which the University have power to inspect and regulate. In 1914-15, the number of colleges affiliated to the Indian Universities is given as 195, of which 147 are Arts Colleges, 22 Law Colleges, four Medical, four Engineering, three Agricultural, one Commercial, and thirteen Teachers' Training Colleges. The number of students in Arts Colleges was 41,847, and in all Colleges 50,579. All colleges, whether under Government or private management, are inspected by the Universities. Colleges receive financial aid from public funds, both provincial and Imperial. Under the Universities Act the Universities are empowered to make regulations about the residence of college students. The rule now is that students who do not reside with parent or guardian must reside either in a boarding house under supervision or in an approved lodging house. The result has been a larger provision of college residential buildings. The hostel system is definitely encouraged by Government and in the latest Resolution (Feb. 1913) Government express the desire to see the hostel system extended to all colleges and secondary schools. The number of female students in Art Colleges only was 406, in other colleges 119, making a total of 525.

### Schools.

Government policy with regard to schools has been to provide a small number of institutions which are to be regarded as models for private enterprise. At the same time they insist on a careful inspection of all schools, whether they are run by municipalities or local boards, by private individuals or by missionary or other societies. Private enterprise is encouraged by an extensive system of grants-in-aid, which are dependent on the efficiency of the school and its expenditure on teachers and general equipment.

### Secondary Schools.

There is some difficulty in the classification of schools, secondary and primary. Here the Fifth Quinquennial Review is followed as issuing from

the Director General of Education. Secondary schools are divided into *English* and *Vernacular* in the first place. In the former English is a subject of instruction in the lower part and the medium of instruction in the upper part of the school. In the latter English is not taught in any way. In the second place these schools are divided into *high* and *middle* schools. In the former instruction in its highest branches leads to the standard of matriculation for a University; in the latter instruction is carried to a standard within three years of that in high schools. Thus there are four kinds of schools, English, High and Middle, and Vernacular, High and Middle. Of these the first two are often called Anglo-Vernacular as they combine instruction through the medium of the vernacular with instruction through the medium of English. But as there are so small a number of vernacular high schools that they are hardly worth including in a classification, and further as the vernacular middle schools are simply the highest stage of vernacular education and should therefore be included in the primary school system, the Review regards the distinction between English High and English Middle schools as a satisfactory classification. The distinction between these two is slight. A middle school in the words of the Review, "is nothing more than a high school with two or three top classes cut off." There are now two examinations which a boy may take at the end of his school career.—(1) The Matriculation examination, (2) the School Final.

### Primary Schools.

Here again there is a difficulty of classification owing to the different systems prevailing in the different provinces. However they are divided generally according to grade into lower primary and upper primary. Middle vernacular schools, classed usually among secondary schools, are really only superior primary schools and bear little relation to the systems prevailing in secondary schools. Primary schools, as the Review points out, have been defined as the education of the masses through the vernacular. If the medium of instruction be taken as the differentiation, then clearly middle vernacular schools ought to be classed as primary. In 1913-14 the number of these schools was 116,650. In the Government Resolution of Feb. 1913 is found the following statement: "It is the desire and hope of the Government of India to see in the not distant future some 91,000 primary public schools added to the 100,000 which already existed for boys and to double the 4½ millions of pupils who now receive instruction in them."

### Primary to Anglo-Vernacular.

The transition from Primary to Anglo-Vernacular schools, that is, from primary to secondary education, is comparable to the transition from a Board school in England to a secondary school under the authority of a Municipality or County Council. But there is a difficulty owing to the different systems prevailing in different Presidencies. Nevertheless in all provinces a boy may begin in a vernacular primary school and pass from it to a secondary school. According to the Quinquennial Review, "in Bombay all children

						1912-13.	1913-14.	1914-15.
Area in square miles .. .. .						98,170		83,238
Population	{	Male .. .. .			18,032,708	No change.	16,859,929	
		Female .. .. .			18,827,328		17,630,155	
TOTAL POPULATION. ..						36,860,036		34,490,084
Public Institutions for Males.								
Number of arts colleges .. .. .						7	7	7
Number of high schools .. .. .						95	91	91
Number of primary schools .. .. .						22,452	22,509	21,389
Male Scholars in Public Institutions.								
In arts colleges .. .. .						1,722	2,062	2,227
In high schools .. .. .						28,110	28,712	30,887
In primary schools .. .. .						592,242	597,962	557,041
Percentage of male scholars in public institutions to male population of school-going age .. .. .						26.0	26.3	26.8
Public Institutions for Females.								
Number of arts colleges .. .. .						.... 3	.... 3	.... 3
Number of high schools .. .. .						1,498	1,845	2,060
Number of primary schools .. .. .								
Female Scholars in Public Institutions.								
In arts colleges .. .. .						.... 287	.... 317	.... 337
In high schools .. .. .						82,254	91,567	93,385
In primary schools .. .. .								
Percentage of female scholars in public institutions to female population of school-going age. .. .. .						3.4	3.7	4.2
TOTAL SCHOLARS in public institutions. { Male ..						704,485	712,503	678,715
{ Female						95,281	105,479	111,714
TOTAL .. ..						799,766	817,982	790,429
TOTAL SCHOLARS (both male and female) in all institutions.						847,244	861,535	836,209
Expenditure (in thousands of rupees).								
From provincial revenues .. .. .						23,11	33,71	36,72
From local funds .. .. .						8,24	11,29	14,13
From municipal funds .. .. .						52	91	1,08
Total Expenditure from public funds .. .. .						31,87	45,91	51,93
From fees .. .. .						18,11	20,60	21,12
From other sources .. .. .						11,90	13,41	12,74
GRAND TOTAL OF EXPENDITURE ..						61,88	79,92	85,79

### Rural Schools.

In the provinces of Bombay, Bengal, the Punjab and the Central Provinces a distinction is drawn between *rural* and *urban* primary schools. The curriculum differs according to this distinction. In the Central Provinces the distinction was, up to the time of the publication of the last Review, one of time mainly, to allow the boys to spend half their time in agricultural work. The object of rural schools is not so much to teach agriculture as to train the minds of prospective agriculturists in an elementary way. In 1905 an attempt was made in Bombay to introduce agricultural text-books, the effect of which may only have been to destroy the faith of the boys in their father's primitive methods without having any appreciable influence on the improvement of agricultural practices. About a year ago a meeting of educational inspectors decided against this experiment. The whole question of remodelling the rural school course has been reconsidered, and in Bombay at least that and the ordinary primary course have been brought closer together. A boy who starts in a rural school can now complete the whole primary course in the same time as a boy who starts in an urban school. The idea is that boys educated in rural schools should not be put at a disadvantage. At the same time—and this is important—an attempt has been made to make rural education, however elementary, form a system of elementary education which should be complete in itself. Hence the differences between rural education and ordinary primary education are unimportant and indefinite, in Bombay at least. The last Government Resolution declares it to be “not practicable at present in most parts of India to draw any great distinction between the curricula of rural and of urban primary schools,” but in the latter class of schools there is special scope for practical teaching of geography, school excursions, etc., and the nature study should vary with the environment and some other form of simple knowledge of the locality might advantageously

and of which the Grant Medical College in Bombay may be taken as a good example. There are agricultural colleges, the most important of which is the Pusa Agricultural College and Research Institute, which trains experts in specialised branches of agricultural science, such as agricultural chemistry, economic botany, mycology and entomology. We may also mention the Indian Institute of Science at Bangalore, the product of generous donations by the Tata family. Two institutions mark the progress of educational interest in the Bombay Presidency, the Government Institute of Science—for whose capacious building (temporarily used as a hospital) the Government is indebted to the generosity of Sir Cowasji Jehangir, Sir Jacob Sassoon, and Sir Currimbhoy Ebrahim—and the College of Commerce, instituted to supply teaching in connection with the establishment of a Faculty of Commerce in the University.

### Colleges for Teachers.

There are training colleges for secondary teachers in various parts of India, and what are called in some cases Training Colleges, in others normal schools, for the training of vernacular teachers. As there has been considerable dissatisfaction on account of the defective qualities and pay of teachers in schools, Government are now wakening to the importance of paying more careful attention to these institutions and the last Resolution provides for a better scheme of pay for teachers.

### Education of Girls.

Hitherto little attention has been paid to this important branch of education, but during the past year the Government of India have set about making enquiries on the subject. Even in the latest Resolution nothing is definitely proposed though certain lines are laid down for guidance of enterprise in this direction. However there do exist schools and colleges for girls, while a number of the female sex are educated at institutions common to both sexes. Arts Colleges, Medical Colleges and the like admit both male and female students, and a small percentage of

Statement of Educational Progress in the UNITED PROVINCES.

		1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
Area in square miles	..		107,164	107,267	} No change.	No change.	106,402
Population	..		24,628,344	24,641,831			
.. } Male	..		22,365,048	22,540,213			
.. } Female	..		47,193,392	47,182,044			24,469,373
Total Population	..						22,365,735
<i>Public Institutions for Males.</i>							
Number of arts colleges	..	31	31	32	32	35	36
Number of high schools	..	112	113	115	117	123	126
Number of primary schools	..	9,267	9,067	9,258	10,158	10,444	10,543
<i>Male Scholars in Public Institutions.</i>							
In arts colleges	..	4,150	4,180	4,602	4,869	5,286	55,794
In high schools	..	32,065	33,192	34,257	35,804	38,232	39,558
In primary schools	..	436,475	432,497	470,935	537,551	554,667	564,200
Percentage of male scholars in public institutions to male population of school-going age.	..	14.6	14.4	15.5	17.4	18.1	18.6
<i>Public Institutions for Females.</i>							
Number of arts colleges	..	4	4	5	5	5	4
Number of high schools	..	23	20	20	21	22	21
Number of primary schools	..	936	941	937	1,006	1,067	1,084
<i>Female Scholars in Public Institutions.</i>							
In arts colleges	..	45	51	54	55	60	66
In high schools	..	1,960	1,854	1,804	1,984	2,187	2,080
In primary schools	..	26,017	37,365	41,340	42,943	46,693	47,916
Percentage of female scholars in public institutions to female population of school-going age.	..	1.2	1.3	1.4	1.5	1.6	1.7
TOTAL SCHOLARS in public institutions. { Male ..	..	533,175	550,311	573,194	643,900	668,707	683,121
.. { Female ..	..	41,529	43,066	48,394	50,269	55,326	57,552
Total	..	574,704	573,407	621,588	694,169	724,233	740,673
TOTAL SCHOLARS (both male and female) in all institutions.	..	647,381	645,737	712,000	788,298	819,472	832,454
<i>Expenditure (in thousands of rupees).</i>							
From provincial revenues	..	29.45	31.33	37.50	48.04	46.74	54.80
From local funds	..	27.69	26.54	26.54	26.57	30.25	32.34
From municipal funds	..	3.01	3.17	3.54	3.72	4.95	5.05
Total Expenditure from public funds	..	60.15	59.24	67.58	78.33	81.94	91.99
From fees	..	17.32	20.50	23.32	23.32	25.07	27.50
From other sources	..	15.76	13.56	19.85	19.55	21.29	22.07
GRAND TOTAL OF EXPENDITURE	..	93.23	93.39	107.93	121.20	128.30	141.56



women attend them. In those Presidency Towns, however, where there are no colleges specially for women, it seems to be generally recognised that there ought to be, particularly when one remembers how important it is to bring the influential class of women and mothers round to some sympathy with modern thought and ideals. It may be presumed that Government will pay very limited attention to this side of education until Indians themselves demand such a move. Most Indians object to invasions on their family life and take a different attitude to women from that of Western races. Still there are schools for girls and female inspectresses employed by Government.

#### European Schools.

There are schools for Europeans and Eurasians in India and they are inspected by Government inspectors specially appointed for the control of European schools and for the allocation of grants to schools under their sphere of influence. The education of the domiciled communities has been found a singularly perplexing problem, and in 1912 a special conference was summoned to consider the matter. The difficulty is that they are a thing apart from the general system of education devoted to Indians proper.

#### Educational Services.

These are divided into (a) the Indian Educational Service, (b) the Provincial Educational Service, (c) the Subordinate Educational Service.

(a) Indian Educational Service.—The Indian Educational Service is comprised of distinguished graduates of Universities of the United Kingdom, chiefly from Oxford and Cambridge. At the head of the Educational Department in each Presidency is the Director of Public Instruction, who is a member of the Service drawn from one of its branches and in all cases a member of the Legislative Council of his Presidency. Under him are Educational Officers in three branches, (a) Inspectors, (b) Principals and Professors of Colleges, (c) Headmasters of High Schools. Under the present system it is still possible for an English graduate sent out from home to start in one branch of the service and pass from one to another at the will of Government. All, with some few exceptions, start at the pay of Rs. 500 per mensem with an annual increment of Rs. 50 per mensem and go up to Rs. 1,000 per mensem, certain Directors of Public Instruction being put on to the salary of Rs. 2,500 per mensem. A small number of personal allowances was granted in 1890, when the service was reorganised and received its title. There

are lower allowances of Rs. 200 to Rs. 250, higher allowances of Rs. 250 to Rs. 500, and an allowance of Rs. 100 after fifteen years of approved service to those who do not get any of the other allowances. Except for the Director of Public Instruction, the limit of the prospect of a member of the Indian Educational Service is Rs. 1,500 a month, the average prospects being considerably less. There is no short service pension. Schemes are on foot to improve the prospects of the service. Hitherto this service which is in reality one of the most important in the country has not been rightly estimated, though its members are as a rule men of real culture. Hence the great difficulty of recruitment. The number of posts in this service in 1907 throughout India was 157. Additions have been made since then, but it is clear that the Service is understaffed, if one considers the range and importance of its work. Hitherto higher educational work has been little appreciated in India, particularly by Englishmen. Now-a-days much is said of its importance, but little done for those who carry it out.

At the head of all Educational departments in India, at the seat of Government, is the Member for Education who sits in the Viceroy's Executive Council.

(b) Provincial Educational Service.—In this service also are found principals and professors of colleges, headmasters and inspectors of schools, and, in addition, translators to Government and members engaged in other exceptional posts. This service is composed of Indians and recruited in India, the pay scheme being arranged on a much lower scale than that of the Indian Service in accordance with the qualifications and the cheaper rates of living of natives of India. The maximum pay is Rs. 700, the minimum pay Rs. 200. There is a general division between two branches, collegiate and general.

(c) Subordinate Educational Service.—The majority of this service are headmasters (a few), assistant deputy inspectors and all the assistant masters in Government high and middle schools. In Bengal a number of poorly paid teachers have been converted into a "lower subordinate service." The pay and prospects of this service are not good, and much complaint is made of the inferior nature of the teaching in schools run by its members. In 1907 the figures for this service stood at 6,025. The maximum pay of this service is somewhere about Rs. 400. The minimum pay used to be Rs. 30, but is now Rs. 40 per mensem.

### STATISTICAL RESULTS.

The statistical table of educational progress in British India published for 1914-15 gives the following results:—

The grand total of pupils in all institutions in 1914-15 was 7,448,419 (the decrease on the figures of the last year is due to the exclusion of Native States). The largest increases occurred in Bengal (52,281), Madras (73,010), the United Provinces (12,932), Burma (45,572), and Assam (18,742).

*Note.*—Bombay, Bihar and Orissa, and Central Provinces show decreases, owing to the exclusion of Native States. As the figures for

1914-15 exclude the statistics of Native States, therefore, the comparison with last year's figures is not correct. The increases would be larger in some cases than what is given above.

The percentage of pupils in public institutions to children of school-going age (reckoned at 15 per cent of the population) has risen in the case of boys to 30·9, in that of girls to 9·9.

The figures for higher institutions in 1914-15 were as follows:—

	Males.	Females.	Total.
In colleges ..	50,054	525	50,579
In High Schools ..	483,249	22,234	505,483
In middle schools ..	527,954	64,555	592,509



The total of those under primary instruction in public and private schools (including primary departments of secondary and other public schools and private institutions where a vernacular is taught was 65,57,200.

The number of those under training for the profession of teaching has risen to 18,098

The number of pupils in technical and industrial schools has decreased to 11,176.

The number of schools for Europeans and the domiciled Community now stands at 38,165.

The number of Mahomedan pupils amounts to 1,725,451, of whom 5,426 are in colleges.

### Expenditure.

The total expenditure in 1914-15 was Rs. 10,91,70,492, an increase of nearly 89½ lakhs on that of the preceding year. Of the total, roughly 633 lakhs are met from public funds (against 550 lakhs in the preceding year), viz., 423 lakhs from provincial, 187 from district and 43 from municipal funds. Of the 458 lakhs from private sources, fees contributed 173 lakhs.

Among the larger provinces, the highest expenditure was in Bengal, 254 lakhs.

**Principal developments.**—In the year 1912-13, the following additional allotments from Imperial funds were announced for education in provinces and politically administered areas—319 lakhs non-recurring from the surplus revenue of that year, and 55 lakhs recurring from the revenue of the year 1913-14. The developments of the five preceding years have been described in the quinquennial review. Compared with the figures for 1910-11, the increase during the past two years in pupils of public institutions has amounted to 13.4 per cent. and that in expenditure to 25.5 per cent.

Among special features of the period are the establishment of a Faculty and the scheme for a college of Commerce in the Bombay University. A generous gift of 10 lakhs to the University of Calcutta was made by Dr. Rash Behari Ghose. A committee worked out a scheme for the Dacca University, a project which has subsequently received the general approval of the Secretary of State. The reports on education in the various provinces show that in Madras the rules for grant-in-aid have been made more elastic and the amount given as grant-in-aid has increased by nearly 5 lakhs. In other provinces improvements have been made in secondary education; and in the Bombay Presidency the pay of assistant teachers in Government secondary schools has been increased. The pay of primary school teachers has likewise been improved; in the Punjab, graded scales of salaries from Rs. 12 to Rs. 30 a month are being generally introduced; in Bihar and Orissa the stipends paid to aided school teachers have been regulated; in the Central Provinces a sum has been earmarked for render-

ing pensionable the pay of all masters drawing Rs. 11 and over. Among developments in Muhammadan education the foundation of an Islamia College at Peshawar has been conspicuous. A committee considered the foundation of a Technological Institute in Calcutta. Other important committees deliberated during the period on primary education, the education of Muhammadans and other important subjects.

It should be observed that the Statistical tables differ from those given last year in the new arrangement necessitated by the rearrangement of the provinces of Bengal and Bihar and Orissa.

### Recent Developments.

The main developments of the last and of immediately preceding years have been described in the resolution which appeared in the *Gazette of India* published on the 22nd February 1913, which also laid down the policy of the Government of India. The year witnessed the assertion at the Imperial Durbar by command of His Most Gracious Majesty the King Emperor of the predominant claims of educational advancement, the announcement of a recurring Imperial grant of 50 lakhs for the promotion of truly popular education, and the high expression of his hopes and wishes for the expansion and improvement of education delivered by His Majesty the King-Emperor in graciously receiving an address presented by the Calcutta University. In addition to the recurring grant of 50 lakhs a recurring grant of 10 lakhs was sanctioned for university and higher education, and a non-recurring grant of 65 lakhs was also made. There has been expansion in expenditure accompanied by an increase of those under instruction.

Other features of recent years have been the collection of materials for the preparation of extensive schemes for the spread of elementary education, and, in certain provinces, for the improvement of secondary and female education; the growth of new ideas regarding university teaching, which has resulted in the proposal for a teaching and residential university at Dacca and Benares and the establishment of Professorships, Readerships, and Lectureships in Universities like those of Calcutta and Bombay; the generous gifts of Sir T. N. Palit and Dr. Rash Behari Ghose to the University of Calcutta; the creation of a department of Industries at Madras as a portion of the scheme of industrial training and development; the sanctioning of an industrial scheme for the Central Provinces; the institution of a College of commerce in Bombay; an inquiry carried out by Colonel Atkinson and Mr. Dawson into the question of bringing technical institutions into closer touch with the employers of labour; the institution of proposals for an Oriental Research Institute; and the conference held in July 1912 on the education of the domiciled community.

# Statement of Educational Progress in BURMA.

		1909-10.	1910-11.	1911-12
Area in square miles	..	236,738	236,738	230,839
Population	{ Male .. .. { Female	{ No change. ..	{ 6,144,301 5,913,604 12,057,905	{ 6,183,494 5,981,723 12,115,217
Total Population				
Public Institutions for Males.				
Number of arts colleges	..	2	2	2
Number of high schools*	..	35	39	36
Number of primary schools	..	5,163	4,895	4,764
Male Scholars in Public Institutions.				
In arts colleges	..	232	261	302
In high schools*	..	9,599	10,388	10,034
In primary schools	..	131,386	124,377	125,532
Percentage of male scholars in public institutions to male population of school-going age.	..	24.1	20.4	20.9
Public Institutions for Females.				
Number of arts colleges	..	..	..	..
Number of high schools	..	9	11	11
Number of primary schools	..	619	553	552
Female Scholars in Public Institutions.				
In arts colleges	..	12	17	22
In high schools	..	1,694	1,974	2,135
In primary schools	..	53,779	53,291	55,854
Percentage of female scholars in public institutions to female population of school-going age.	..	9.1	8.1	8.5
TOTAL SCHOLARS in public institutions. { Male .. .. { Female				
	Total	70,106	71,032	75,909
		262,963	259,761	270,310
		433,973	430,992	445,255
TOTAL SCHOLARS (both male and female) in all institutions.				
From provincial revenues	..	17,03	16,71	18,98
From local funds	..	4,07	4,08	4,22
From municipal funds	..	3,40	3,48	3,68
Total Expenditure from public funds	..	24,50	24,27	26,88
From fees	..	13,77	14,53	15,09
From other sources	..	4,44	4,83	5,40
GRAND TOTAL OF EXPENDITURE	..	42,71	43,63	47,37

(a) Includes Rs. 72,817 being provincial contribution to District Cess Fund.

(b) Includes Rs. 57,772 being provincial contribution to Municipalities.

## Statement of Educational Progress in ASSAM.

						1912-13.	1913-14.	1914-15.
Area in square miles .. .. .						61,471	} No change.	53,015
Population ..	{	Male .. .. .			3,038,287	3,467,621		
		Female .. .. .			3,421,570	3,246,014		
TOTAL POPULATION ..						7,059,857		6,713,635
Public Institutions for Males.								
Number of arts colleges .. .. .						2	2	2
Number of high schools .. .. .						27	29	30
Number of primary schools .. .. .						3,534	3,760	3,926
Male Scholars in Public Institutions.								
In arts colleges .. .. .						300	441	550
In high schools .. .. .						9,085	11,186	12,223
In primary schools .. .. .						138,236	150,584	162,291
Percentage of male scholars in public institutions to male population of school-going age.						30.8	33.9	38.4
Public Institutions for Females.								
Number of arts colleges .. .. .						..... 2	..... 2	..... 2
Number of high schools .. .. .								
Number of primary schools .. .. .						256	300	345
Female Scholars in Public Institutions.								
In arts colleges .. .. .						.....	1	1
In high schools .. .. .						352	411	434
In primary schools .. .. .						17,845	20,032	24,587
Percentage of female scholars in public institutions to female population of school-going age.						3.7	4.4	5.5
TOTAL SCHOLARS in public institutions. { Male ..						168,364	185,386	199,891
{ Female.						19,085	22,747	26,761
TOTAL ..						187,449	208,133	226,652
TOTAL SCHOLARS (both male and female) in all institutions.						194,288	215,141	233,863
Expenditure (in thousands of rupees).								
From provincial revenues .. .. .						7.71	10.76	12.33
From local funds .. .. .						5.82	6.25	7.81
From municipal funds .. .. .						16	33	44
Total Expenditure from public funds .. .. .						13.69	17.34	20.58
From fees .. .. .						3.02	3.50	3.75
From other sources .. .. .						2.33	2.44	2.21
GRAND TOTAL OF EXPENDITURE .. .. .						19.04	23.28	26.54

Statement of Educational Progress in CENTRAL PROVINCES and BERAR.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
Area in square miles .. .. .	..	..	..	..	..	..
Population .. { Male .. .. .	..	..	..	..	..	..
.. { Female .. .. .	..	..	..	..	..	..
Total Population ..	..	..	..	..	..	..
<i>Public Institutions for Males.</i>						
Number of arts colleges .. .. .	3	3	4	4	4	4
Number of high schools * .. .. .	35	35	35	39	40	42
Number of primary schools .. .. .	3,019	3,004	3,195	3,471	3,846	3,727
<i>Male Scholars in Public Institutions.</i>						
In arts colleges .. .. .	479	514	608	705	860	1,013
In high schools * .. .. .	3,059	3,236	3,102	3,547	3,624	4,069
In primary schools .. .. .	212,857	216,750	223,255	248,439	274,664	257,980
Percentage of male scholars in public institutions to male population of school-going age.	26.2	23.1	24.2	25.9	27.9	30.1
<i>Public Institutions for Females.</i>						
Number of arts colleges .. .. .	..	..	..	..	..	..
Number of high schools .. .. .	4	4	5	7	7	7
Number of primary schools .. .. .	391	301	309	322	320	318
<i>Female Scholars in Public Institutions.</i>						
In arts colleges .. .. .	..	..	..	..	..	..
In high schools .. .. .	24	23	23	51	43	46
In primary schools .. .. .	20,669	20,033	27,948	30,389	33,051	31,533
Percentage of female scholars in public institutions to female population of school-going age.	2.8	2.4	2.6	2.8	3.1	3.3
TOTAL SCHOLARS in public institutions. { Male .. .. .	266,850	269,062	282,237	302,077	323,844	312,755
.. { Female .. .. .	..	..	..	..	..	..
Total .. .. .	266,850	269,062	282,237	302,077	323,844	312,755
TOTAL SCHOLARS (both male and female) in all institutions.	266,850	269,062	282,237	302,077	323,844	312,755
<i>Expenditure (in thousands of rupees).</i>						
From provincial revenues .. .. .	10.92	11.49	10.94	11.87	13.82	14.03
From local funds .. .. .	10.65	11.05	12.08	13.88	14.15	15.42
From municipal funds .. .. .	1.59	1.88	2.98	3.70	3.53	4.27
Total Expenditure from public funds	23.16	24.41	25.91	29.45	31.50	33.72
From fees .. .. .	1.95	2.29	2.84	3.67	4.72	4.72
From other sources .. .. .	3.81	4.15	4.18	4.76	5.89	5.61
GRAND TOTAL OF EXPENDITURE .. .. .	28.92	30.85	32.95	37.88	41.30	44.05

\* Include also Vernacular high schools.

# Statement of Educational Progress in the NORTH-WEST FRONTIER PROVINCE

		1909-10.	1910-11.	1911-12.	1912-13.
Area in square miles	{ Male .. Female .. }	No change.	13,193 1,132,102 1,014,831 2,196,933	No change.	No change.
Population	Total Population				
<i>Public Institutions for Males.</i>					
Number of arts colleges	..	1	1	1	1
Number of high schools	..	12	12	12	12
Number of primary schools	..	267	264	260	335
<i>Male Scholars in Public Institutions.</i>					
In arts colleges	..	30	22	38	37
In high schools	..	4,255	4,456	5,146	5,438
In primary schools	..	12,069	13,034	14,129	16,899
Percentage of male scholars in public institutions to male population of school-going age.	..	11.2	11.8	13.1	15.4
<i>Public Institutions for Females.</i>					
Number of arts colleges	..	..	..	..	..
Number of high schools	..	..	..	..	..
Number of primary schools	..	25	27	28	29
<i>Female Scholars in Public Institutions.</i>					
In arts colleges	..	..	..	..	..
In high schools	..	..	..	..	..
In primary schools	..	1,576	1,775	1,925	2,044
Percentage of female scholars in public institutions to female population of school-going age.	..	1.3	1.4	1.5	1.6
<b>TOTAL SCHOLARS in public institutions. (Male .. Female ..)</b>					
	Total ..	19,389	20,919	23,236	27,344
		1,871	2,001	2,247	2,396
		21,462	23,012	25,483	29,740
		30,045	31,891	34,911	38,472
<b>TOTAL SCHOLARS (both male and female) in all institutions.</b>					
<i>Expenditure (in thousand of rupees)</i>					
From provincial revenues	..	5.3	4.75	99	4.68
From local funds	..	61	92	142	3.06
From municipal funds	..	51	61	68	1.76
Total Expenditure from public fund	..	2.02	2.88	3.09	8.50
From fees	..	45	47	56	65
From other sources	..	65	53	63	47
GRAND TOTAL OF EXPENDITURE	..	3.12	3.88	4.28	9.62

\* Imperial Revenues.

† Including Rs. 58,215 from Imperial Revenues.

Statement of Educational Progress in COORG.

		1909-10.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
Area in square miles							
Population	{ Male						
	{ Female						
TOTAL POPULATION ..							
Public Institutions for Males.							
Number of arts colleges							
Number of high schools							
Number of primary schools							
Male Scholars in Public Institutions.							
In arts colleges							
In high schools							
In primary schools							
Percentage of male scholars in public institutions to male population of school-going age.							
Public Institutions for Females.							
Number of arts colleges							
Number of high schools							
Number of primary schools							
Female Scholars in Public Institutions.							
In arts colleges							
In high schools							
In primary schools							
Percentage of female scholars in public institutions to female population of school-going age.							
TOTAL SCHOLARS in public institutions.							
{ Male ..							
{ Female ..							
TOTAL ..							
TOTAL SCHOLARS (both male and female in all institutions.							
Expenditure (in thousands of rupees).							
From provincial revenues							
From local funds							
From municipal funds							
Total Expenditure from public funds							
From fees							
From other sources							
GRAND TOTAL OF EXPENDITURE							



## Statement of Educational Progress in DELHI.

					1912-13.	1913-14.	1914-15.
<b>Area in square miles</b> .. .. .					528		
<b>Population</b> ..	{ Male .. .. .				221,360	} No change.	No change.
	{ Female .. .. .				175,637		
<b>TOTAL POPULATION</b> ..					396,997		
<i>Public Institutions for Males.</i>							
<b>Number of arts colleges</b> .. .. .					2	2	2
<b>Number of high schools</b> .. .. .					6	6	6
<b>Number of primary schools</b> .. .. .					69	76	82
<i>Male Scholars in Public Institutions</i>							
<b>In art colleges</b> .. .. .					219	236	289
<b>In high schools</b> .. .. .					1,830	1,780	1,915
<b>In primary schools</b> .. .. .					3,907	4,877	5,181
<b>Percentage of male scholars in public institutions</b>							
<b>female population of school-going age</b> .. ..					20.9	22.8	24.9
<i>Public Institutions for Females.</i>							
<b>Number of arts colleges</b> .. .. .					2		
<b>Number of high schools</b> .. .. .							
<b>Number of primary schools</b> .. .. .					9	10	10
<i>Female Scholars in Public Institutions</i>							
<b>In arts colleges</b> .. .. .					155		
<b>In high schools</b> .. .. .					461		
<b>In primary schools</b> .. .. .						516	543
<b>Percentage of female scholars in public institutions to</b>							
<b>female population of school-going age.</b> .. ..					3.6	4.4	6.7
<b>TOTAL SCHOLARS in public institutions</b> ..					{ Male .. 6,634	7,580	8,250
					{ Female .. 941	1,156	1,751
<b>TOTAL</b> .. .. .					7,578	8,736	10,001
<b>TOTAL SCHOLARS (both male and female in all institutions)</b> .. .. .					11,275	12,933	13,200
<i>Expenditure (in thousands of Rupees)</i>							
<b>From provincial revenues</b> .. .. .					1.22	69	1.92
<b>From local funds</b> .. .. .					9	27	33*
<b>From Municipal funds</b> .. .. .					14	47	55†
<b>Total Expenditure from public funds</b> .. .. .					1.45	1.43	2.80
<b>From fees</b> .. .. .					41	83	91
<b>From other sources</b> .. .. .					41	97	1.08
<b>GRAND TOTAL OF EXPENDITURE</b> ..					3.27	2.23	4.79

\* Includes Provincial contribution of Rs. 12,576.

† Includes Provincial contribution of Rs. 9,763.

# The Benares Hindu University.

There were originally three distinct movements in favour of founding a Central Hindu University. In the first place, in 1904, the Hon. Pandit Madan Mohan Malaviya made proposals which were confirmed and approved by the Sanatan Dharma Mahasabha or Congress of Hindu Religion which met at Allahabad in January 1906. About that time, Mrs. Annie Besant also put forward the idea of establishing a University at Benares and applied to the Government for a charter. In the third place, a number of Hindu gentlemen under the guidance of the Hon. Maharaja Sir Rameshwar Singh Bahadur, K.C.I.E., of Darbhanga were considering the possibilities of starting an educational institution at Benares. The leaders of these movements soon recognised that a union of forces was essential, and in April 1911 Mrs. Besant and the Hon. Pandit Madan Mohan Malaviya met at Allahabad to consider possible lines of agreement. This meeting was followed shortly afterwards by another, when it was agreed that the first governing body should consist of representatives of the Hindu community, Mrs. Besant and representative trustees of the Central Hindu College and also that the Theological faculty should be entirely in the hands of Hindus. At the same time Mrs. Besant agreed to withdraw her petition for a charter which was then before the Secretary of State. At subsequent meetings presided over by the Maharaja Bahadur of Darbhanga a draft constitution was arranged and it was decided to wait upon the Hon. Member for Education and lay before him the provisional scheme. In the meantime, deputations for the collection of funds were instituted and these visited the leading centres in India. The result was most satisfactory. Amounts, big and small, were promised not only from India, but from Indians so far afield as Borneo, Mauritius and South Africa; and besides Hindus of all denominations and stations in life, some Mahomedans, and a few Europeans, official as well as unofficial, have promised to contribute.

**Government Approval.**—In October 1911, Sir Harcourt Butler wrote a very sympathetic letter signifying the approval of Government to the scheme and indicating the conditions laid down by the Government of India:—

1. The Hindus should approach Government in a body, like the Mahomedans.
2. A strong, efficient and financially sound college with an adequate European staff should be the basis of the scheme.
3. The University should differ from existing Indian Universities by being a teaching and residential institution and by offering religious instruction.
4. The movement should be entirely educational.
5. There should be the same measure of Government supervision as in the case of the proposed University at Aligarh.

It was subsequently added that a sum of Rs. 50,00,000 must be collected, but the capitalised value of the properties transferred in trust and the perpetual grants made by the Maharajas of Jodhpur, Kashmir and Bikanir may be included.

**Objects of the University.**—These may be said to be as follows:—

1. To promote the study of the Hindu Shastras and of Sanskrit literature generally, as a means of preserving and popularising the best thoughts and culture of the Hindus and all that was good and great in the ancient civilisation of India.
2. To promote learning and research generally in arts and science in all branches.
3. To advance and diffuse such scientific, technical and professional knowledge, combined with the necessary practical training, as is best calculated to promote indigenous industries and develop the material resources of the country.
4. To promote the building up of character in youth by making religion and ethics an integral part of education.

**Proposed Faculties.**—In a letter to Sir Harcourt Butler the Maharaja Bahadur of Darbhanga has given an outline of the proposed faculties, which will be those of Oriental studies, Theology, Arts, Science (Pure and Applied) and Law. The main objects of the first-named will be to foster the study of Sanskrit and its literature. It is proposed to place in charge of the work a European Sanskrit scholar who will be assisted by Indian professors and pandits of the old class. The faculties of Arts and Science will work for the present on the lines laid down by the existing universities. The study of some special branch of technical education will be best inaugurated under the heading Applied Science which will be expanded into a Faculty of Technology in due course. The Faculty of Law will specialise in the Hindu Law and its study from original sources. It is hoped also that in course of time there will be Faculties or Colleges of Agriculture, Commerce, Medicine, Surgery and other branches of knowledge such as Music and the Fine Arts.

**Proposed constitution.**—In July, 1914, Sir Harcourt Butler addressed a letter to the Maharajah of Darbhanga, in which he stated that the Government of India and the Secretary of State had come to the conclusion that the best form of constitution would be to constitute the Lieutenant-Governor of the United Provinces ex-officio Chancellor of the University with certain opportunities for giving advice and certain powers of intervention and control. "The Hindu University," he wrote, "though not empowered to affiliate colleges from outside will be Imperial in the sense that subject to regulations, it will admit students from all parts of India, on the other hand it will be localised in or by Benares. There will be obvious advantages in having as Chancellor of the University the Lieutenant-Governor of the province who is also Chancellor of the Allahabad University and who will be able to help to co-ordinate the work between the two, to secure them corresponding advantages and to foster a spirit of healthy co-operation. Moreover, such a constitution is in accord with the general policy of decentralization which is now pursued by the Government of India."

The powers which, in the opinion of Government, it is necessary to reserve to the Chancellor were enumerated. Some of these had been suggested by the University Committee, others were emergency powers which might never be exercised. The principle underlying them all is that, in the interest of the rising generation and the parents, the Government must be in co-operation with University and in a position to help it effectively and secure sound finance. The interest of the Government and the students and their parents in this matter are necessarily identical.

In concluding the letter referred to above, Sir Harcourt Butler said :—"In order to meet the sentiment of the subscribers it has been conceded that the University shall be called the **Benares Hindu University**, it will have no religious test and will be open to students of all denominations as well as Hindus. Hindu theological teaching and observances will not be compulsory for any but Hindus. It will also be a teaching and residential university. The terms mentioned above represent the conditions, the acceptance of which is a necessary precedent to the elaboration of any detailed scheme.

#### The Bill Passed.

On the basis of these principles further discussion took place between the Education Member of the Government of India and the promoters of the University, and by degrees complete agreement was reached. A Bill embodying this agreement was introduced into the Imperial Legislative Council in 1915 and passed at the closing session of the Council. For a summary of this debate the reader is referred to the section which records the work of The Imperial Legislative Council (q.v.). The cardinal features of the Act are as follows :—

It establishes and incorporates a teaching and residential Hindu University at Benares. First of all, it creates a corporation sole of the University. The portals of the University are "open to persons of all classes, castes and creeds," but provision shall be made "for religious instruction and examination in Hindu religion only;" this instruction is compulsory in the case of Hindus. Special arrangements are to be made for the religious instruction of Jain or Sikh students. The Governor-General of India for the time being shall be the Lord Rector, the Lieutenant-Governor for the time being of the United Provinces of Agra and Oudh shall be the Visitor, who has the power to inspect the University and its colleges; and to annul the proceedings of the University if they are found to be not in conformity with this Act, Statutes and Regulations. The authorities and Officers of the University are named to be (1) The Chancellor; (2) The Pro-Chancellor; (3) The Vice-Chancellor; (4) The Pro-Vice-Chancellor; (5) The Court; (6) The Council; (7) The Senate; (8) The Syndicate; (9) The Faculties and their Deans; (10) The Registrar; and (11) The Treasurer. In administrative affairs of the University, the Court is the supreme governing body and has the power to review the acts of the Senate. The executive body of the Court is called the Council. The Senate is the academic body of which

the executive body is called the Syndicate. To meet the recurring charges, a permanent endowment of fifty lacs of rupees is to be made and invested in authorised securities. The degrees, diplomas, certificates and other academic distinctions granted by the University are to have the same recognition at the hands of Government as those granted by the existing Indian Universities. The formation and scope of Statutes and Regulations of the University are provided with minute detail. The Governor-General in Council has extensive power to act in cases of emergency, viz., the removal of any member of the teaching staff, the appointment of a certain examiner, and the raising of the scale of remuneration of the staff. The University grows out of the present Hindu University Society, which is now dissolved and all its property, rights, powers and privileges are to vest in the Benares Hindu University.

It will be seen from the above that the Act stipulates that the University shall commence with an endowment of fifty lakhs of rupees. Sums aggregating approximately Rs. 82 lakhs have been promised, and Rs. 50 lakhs paid. The Government of India have undertaken to make an annual contribution of a lakh of rupees.

**Foundation stone laid.**—The foundation stone was laid in February, 1916, by H. E. the Viceroy. The Maharaja of Darbhanga, as President of the University Committee, read an address of welcome in which he recounted the history of the scheme and H. E. the Viceroy in his speech said :—"It is the declared policy of the Government of India to do all within their power and within their means to multiply the number of universities throughout India, realising, as we do, that the greatest boon Government can give to India is the diffusion of higher education through the creation of new universities. Many, many more are needed, but the new universities to be established at Dacca, Benares, and Bankipore, soon to be followed, I hope, by universities in Burma and the Central Provinces, may be regarded as steps taken in the right direction. Here at any rate in this city is a case where we can all stand together upon a common platform, for no one can dispute that the Benares Hindu University will add to the facilities for higher education and take to some extent the pressure off from the existing institutions, while it is the proud boast of at least one of those who have so successfully engineered this movement that the degrees of the Benares Hindu University shall be not only not lower but higher in standard than those of existing universities. It has even been claimed that this university will only justify its existence when the education given within its precincts shall make it unnecessary for Indian students to go to foreign countries for their studies and when such expeditions will be limited to advanced scholars and professors who will travel abroad to exchange ideas with the doctors and learned men of other continents in order to make the latest researches in all branches of knowledge available to their own alumni at Benares."

**Denominational character.**—Speaking of the denominational character of the University, His Excellency said :—"There are some who shudder at the very word denominational and

some who dislike new departures of any kind. Controversy has raged around such points in England and educational problems have a way of stirring up more feeling than almost any other social question. I do not think it is unnatural, for their importance cannot be exaggerated. If you realise that the object of an educational system must be to draw out from every man and woman the very best that is in them so that their talents may be developed to their fullest capacity not only for their individual fulfilment of themselves but also for the benefit of the society of which they find themselves members, if you realise this is it not natural that men should strive with might and main to attain and be content with only the very best and is it not natural that the strife should produce a mighty close of opinion and conviction? The questions at issue cannot be settled by theory and discussion. Education is not an exact science and never will be. We must also have experiment and I for one consider that Lord Ripon was a sagacious man when he deprecated that the educational system of this country should be cast in one common mould and advocated, as he was never tired of doing, that variety which alone he urged can secure the free development of every side and every aspect of rational character.

"I should like to remind you too that this new departure of a denominational university is not quite such a novel idea as some of you may think, for the Education Commission appointed by Lord Ripon, while recognising that the declared neutrality of the State forbids its connecting the institutions directly maintained by it with any one form of faith, suggested the establishment of institutions of widely different types in which might be inculcated such forms of faith as various sections of the community may accept as desirable for the formation of character and awakening of thought. They recognised the danger that a denominational college runs some risk of confining its benefits to a particular section of the community and thus of deepening the lines of difference already existing. I am not terrified by the bogey of religious intolerance. Rather do I think that a deep belief in and reverence for one's own religion ought to foster a spirit of respect for the religious convictions of others and signs are not wanting that the day is dawning when tolerance and mutual good-will shall take the place of fanaticism and hatred."

**First Meeting of the Court.**—In the absence of the Maharaja Scindia of Gwalior, the Maharaja of Benares presided at the first meeting of the Court of the University in August, 1916. The Vice-Chancellor (Dr. Sundar Lal) in his statement said that the total sum promised for the University, including the valuation of annuities granted by the rulers of Indian States amounted to Rs. 96,52,496. Of this sum, including the valuation of annuities, Rs. 59,74,337 had been released. Excluding schools, offices or other bodies, who had paid in their collec-

tive subscriptions under one single name, this amount had been collected from 23,429 subscribers, of whom 536 persons had each paid a sum of Rs. 500 or more. The Government of India had made a recurring grant of one lakh a year, the capital value of which at the rate of 3½ per cent. came to 35 lakhs.

**Regulations.**—Speaking of regulations, which are not appended to the Act, the Vice-Chancellor said that the Committee of the Hindu University Society prepared a draft of regulations required and submitted it to the Government of India for consideration. The Hindu University Society also appointed a sub-committee to settle the regulations, which were not finally settled as they require further consideration at the hands of the Government of India and of the visitor of the University. Section 18 of the Act has provided that first regulations "shall be framed as directed by the Governor-General-in-Council," and that, to be valid, they must receive his previous approval. Accordingly, a committee, consisting of the Hon. Sir Sankaran Nair, Member for Education, and Mr. Sharp, the Education Commissioner, Sir Edward MacLagan, Secretary to Government of India in the Education Department, Mr. O'Donnell as a representative of the Visitor, and Dr. Sundar Lal considered various points brought forward and the matter is now receiving the consideration of the Government of India.

**Finances.**—In conclusion the Vice-Chancellor said:—"The funds that we have collected have enabled us to provide the permanent minimum endowment of fifty lakhs which we are required by the Act to provide for the recurring expenditure of the University. We have also money in hand to pay for land which is being acquired for us. But the many educational and residential buildings, which it is absolutely necessary for us to erect in the immediate future, will cost at the lowest computation a sum of thirty lakhs, and we have only a fraction of this amount in our hand. Besides this sum we stand in need of a great deal more money in order to develop what is called the modern side of University education, for, you know, our aim is to combine old and new ideas of the University, that is, to build up a University which will not merely promote literary and philosophical studies but will also provide instructions and training in the more fruitful applications of science to industries, both agricultural and manufacturing, and the liberal help, which the princes and people of India have extended to the University in the past, encourages the hope that we shall receive the necessary support in the future, a support which will put us in a position to build up, at no distant date, an institution which will be a source of strength and pride to the great and ancient community with the name of which it is associated."

The Chancellor of the University is H. H. the Maharaja of Mysore, and the Pro-Chancellor is H. H. the Maharaja of Gwalior.

## The Mahomedan University.

The movement in favour of transforming the Mahomedan Anglo-Oriental College at Aligarh into a teaching and residential University was started as early as the end of last century. It was hoped that the foundation of such an institution would awaken among Mahomedans the memory of their old seats of learning and prove an incentive to them in the future to regain the intellectual eminence from which they seem to have fallen of late years. Some time ago it was observed in a government report that the backwardness in education on the part of Mahomedans was due partly to poverty, partly to indifference and partly to their educational wants not being the same as those of the remainder of the population amongst whom they live. In this year's report, however, it is stated that a remarkable awakening on the part of Mahomedans in this direction has been witnessed during the last decade, when the total number of pupils under instruction in all classes of institutions rose by nearly 60 per cent. On the other hand in the matter of higher education their numbers remain well below that proportion notwithstanding the large relative increase. It was the aim of Sir Syed Ahmed Khan, K.C.S.I., years ago to place the benefits of a liberal education within the reach of the Mahomedan community and in 1875 a school was opened which three years later was converted into the Aligarh College. Under the inspiring influence of Mr. Beck and of Mr. (now Sir) Theodore Morison great strides have been made. The college is now affiliated to the Allahabad University for the First Arts and B.A. for the B. Sc. in mathematics, chemistry and physics, for the M. Sc. in mathematics and chemistry and D. Sc. in mathematics; and for the M. A. in English, Arabic, Persian, Sanskrit, History, Philosophy, Political Economy and Mathematics. The students of the college are also instructed in the theology and faith of Islam.

**State of the Project.**—His Highness the Aga Khan, the foremost Indian Mahomedan, had for some time been waiting until the time was ripe to make an appeal for funds for the University, which he had constantly held before his co-religionists as the educational goal towards which they should strive. He conceived that the moment had arrived in 1911, when His Majesty the King Emperor visited India to announce in person his coronation to his Indian people. As the result of a spirited appeal, followed by a very active personal canvas, His Highness was able to secure promises aggregating some thirty lakhs of rupees. A draft constitution was drawn up and a consultative committee was formed. But the draft constitution was not approved by the Secretary of State, and on the question of the right of affiliating in particular there was a sharp difference of opinion. Government laid down, as in the case of the proposed Hindu University, that the new university should not have the power of affiliating Moslem institutions in other parts of India. Thereafter the project lapsed.

In 1915, when the Hindu University movement crystallised in the Hindu University Act further steps were taken to come to an agreement with the Government of India. The Government however laid down at once that the principles governing the constitution of the Hindu University would be applied to all other institutions of a like character, and that they were not prepared to consider any proposals, or to receive any deputation, which did not accept this governing rule. On October 15th, 1915, a meeting of the Moslem University Association was held at Aligarh, under the presidency of the Raja of Mahanudabad, when it was proposed that the meeting recommends to the Moslem University Foundation Committee the acceptance of the Moslem University on the lines of the Hindu University. The resolution was declared to have been carried, but this was subsequently disputed and an official report of the proceedings was issued. It is evident that whatever transpired at the Aligarh meeting a large number of Indian Moslems are not prepared to accept a constitution for their University similar to that of the Hindu University, and that there is no prospect of agreement. Nor is there the slightest prospect of the Government of India agreeing to any markedly different constitution. The prospects of the University materialising are therefore exceedingly remote; it is a curious sequel that the Hindu University, which was a poor second in the field, should have received its Act and be proceeding with the necessary buildings whilst the Moslem University, started long before, should be indefinitely held up. It has been proposed that the interest on the funds subscribed should be devoted to other educational objects, such as scholarships; but this is opposed by some of the subscribers, who maintain that they subscribed to a University, and if the funds are not to be devoted to this purpose they should be returned to the donors.

**Alteration of Plans.**—In April, 1916, a meeting of the Foundation Committee moved the following resolution.—“Having regard to the refusal of the Government to grant to the Mahomedans a university on any principles other than those granted to the Hindus, this meeting of the Muslim University Foundation Committee has no other alternative at present but to accept the principles of the Hindu University Act, provided, however, that in framing the regulations the Government will have due regard to the peculiar position the Aligarh College occupies in the scheme of the Muslim University and that the said regulations framed according to the Act should be placed before the members of the Constitution Committee for their approval but if not accepted by it by the majority of two thirds of the votes, the said regulations should be placed before the Foundation Committee, and, provided also that powers are given to the Muslim University of recognising schools outside Aligarh similar to those exercised by the Government Universities.”

## Patna University.

At the meeting of the Imperial Legislative Council on September 27, 1916, Sir Sankaran Nair introduced a Bill to establish and incorporate a University at Patna. He said that as soon as the new province of Bihar and Orissa was constituted in 1912 it was recognised that in order to make it a self-contained Province it was necessary to furnish it with two institutions in particular, *viz.*, a high court and a university. The high court was an accomplished fact and it remained for them to bring into existence the desired university. A committee consisting of 6 Europeans and 8 Indians was for this purpose appointed in May 1913, which began its operations in July of that year, and reported to the Government in March 1914. That report was published and after considering the criticisms on the proposals the local Government submitted their scheme on the 28th May 1915 to the Government of India. All those proposals were carefully considered by the Indian Government which submitted a scheme on October 29 1915, to the Secretary of State who has sanctioned it.

**Features of the Scheme.**—The main feature of the scheme is that there should be a central residential and teaching University at Patna. But the colleges admitted to the privileges of the new University will be of two classes: "Colleges of the University," meaning the Patna College, the Training College for teachers at Patna and any other college which may be established hereafter, and the buildings of which may be situated within one mile from the Senate House of the University; and "external colleges," meaning the colleges at present existing in or which may be hereafter established in the towns of Muzaffarpore, Bhagalpur, Cuttack and Hazaribagh. The Bihar National College at Bankipore, however, is to be an external college.

The University is to be deemed to have been incorporated for the purpose, among others, of supervising and controlling the administration of the colleges of the University in all matters of education and discipline, while its powers in respect of the external colleges are limited to inspection and supervision. Sir Sankaran Nair, in his speech, gave some further particulars regarding the differences proposed between colleges of the University and external colleges. The latter, with the exception of the Cuttack College and the Bihar National College, are to teach only up to the B.A. pass degree and the Intermediate Science examination, all teaching for the higher courses being concentrated in the former. The original scheme, as drafted by the Patna University Committee, was that there should be a central residential and teaching University at Patna. This, if it had been strictly adhered to, would have involved the extinction of the colleges which already exist in the mofussil towns of the Province. Even if additional colleges, as proposed by the Patna University Committee, had been established in Patna, this would have been a serious hardship to the students at present attending the mofussil colleges.

As the additional colleges cannot be started owing to the financial stringency created by the war for several years, the idea of concentrating higher education in Bihar in a single teaching and residential University at Patna, was absolutely impracticable. The original idea had, therefore, to be modified and extended so as to include among the functions of the new University, those of an affiliating University of the type of the existing Indian Universities in relation to the external colleges.

**Courses of Study.**—The Vice-Chancellor will control all the officers and servants of the University and Patna Colleges, while he is to be only the chief visiting and inspecting officer of the University so far as external colleges are concerned. The Syndicate will control the courses of study, the examinations and all matters of education in the colleges of the University, but they are responsible only for the supervision and inspection of such matters in the external colleges. As to the courses of study it is intended that the University is to undertake the whole of the science teaching of the University colleges at Patna, law teaching, and the Honours B.A., and the post graduate work in arts subjects. Provision is to be made for a system of inter-collegiate lectures in the B.A. pass, and so far as is possible in the junior classes at Patna. But the external colleges will teach in arts subjects only up to the pass B.A. and to intermediate science in science subjects. As exceptions to the above the Cuttack College will provide the teaching for the Honours B.A. and the pass B.Sc., and the Bihar National College will provide teaching for the pass B.Sc.

**Senate and Syndicate.**—The first Senate and the Syndicate will be constituted by the Act itself. The next and the ensuing Senates will consist of not less than 40 and no more than 60 persons. The Senate will include certain ex-officio fellows, four fellows elected by the faculties, eight fellows elected by certain classes of fellows according to the regulations framed for that purpose. The Senate is only to be a deliberative body. Its resolutions are not binding on the Syndicate. The Senate differs in this respect from a Senate constituted under the Universities Act of 1904, which has the power of making regulations providing for the courses of study to be followed and the conditions to be complied with by candidates for the university examinations and also for the conditions to be complied with by schools desiring recognition for the purpose of sending pupils for the Matriculation examination. The ensuing syndicates will consist of 16 members, some of them ex-officio. The Chancellor shall nominate four persons, and nine persons are to be elected by the Senate. The Syndicate will have control of all matters concerning education under the Indian Universities Act now in force. The Executive Government of the University is vested in the Syndicate while under the Bill a full time Vice-Chancellor is to be the principal executive officer of the University.

## Mysore University.

During the past few years the desire for a separate university for Mysore has been growing in intensity and the Representative Assembly has on several occasions given expression to the wishes of the people in this respect. In the early part of 1916 the movement to start a local University, taking into account the special circumstances and wants of the State, came to a head and a draft scheme for its establishment was published on April 1. According to that draft the Mysore University will be a federation of two colleges under a common Government with head-quarters at Mysore, the capital of the State. A special feature of the university will be that the study of the vernaculars will be compulsory throughout the three years' course. The university will, as far as possible, be an independent incorporated body and the administration of its affairs will be left in the hands of its council and senate.

**Constitution.**—The Mysore University Bill, introduced at the meeting of the Legislative Assembly in June, provides that H. H. the Maharaja shall be the Chancellor, who may appoint a Pro-Chancellor to exercise the functions of the Chancellor as may be delegated to him. The executive government of the University is vested in the University Council, consisting of the Vice-Chancellor who shall be appointed by the Chancellor, principals of constituent colleges, deans of faculties of arts and science, and others appointed by the Chancellor. The Council will consist of not less than nine and not more than twelve members, of whom not less than four shall be university professors. The Senate shall consist of not less than forty and not more than sixty fellows as may be fixed by the Chancellor. The University may confer degrees of B.A., B.Sc., M.A., M.Sc., B.T. (Bachelor of Teaching), Doctor of Literature, and Doctor of Science.

**Finances.**—The total estimated expenditure from State funds for 1915-16 on education is Rs. 22.25 lakhs of which more than 12 lakhs are devoted to primary and secondary education in addition to a sum of about Rs. 5 lakhs from other sources, and it is likely that these

allotments will be further increased in further years. The capital outlay on buildings will come to about Rs. 13.75 lakhs. The recurring expenditure of about Rs. 3.5 lakhs may be taken to represent a capital outlay of Rs. 87.5 lakhs. The total capitalised cost of the university may thus be said to amount to nearly Rs. 100 lakhs. Considering that the university is intended for a population of six millions this provision will be found to be ample for the next five or ten years, compared with the scale proposed for the new universities in other parts of India.

The Dewan, Sir M. Visweswaraya, speaking on the Bill, referred to the fact that the Government were at present providing the whole cost of the University from public funds. They had also established a number of foreign scholarships, nearly all of which would be available in the future for the alumni of the new university. But in order to promote the many-sided activities of the new university, they wanted more funds particularly in the shape of endowments, and he asked every lover of education and well-wisher of the State to endow prizes, scholarships, medals, lectureship, etc. He suggested the formation of Committees, chiefly composed of non-official gentlemen, to collect funds for the purpose.

Mr. S. R. Bannerji, Senior Councillor, in formally introducing the Bill referred to the special features of the scheme, namely, the compulsory study of the vernaculars, the modification of the English course on rational lines, the introduction of university lectures and the tutorial system, and the reduction of the collegiate course to three years and the introduction of an extra preparatory course after the school final in the high schools. Besides these social and corporate life was to be encouraged and the draft scheme intended the Mysore degree to be a hallmark of a high standard of general culture.

The following appointments have been made—Chancellor, H. H. the Maharaja of Mysore. Pro-Chancellor, the Yuvaraja of Mysore. Vice-Chancellor, Mr. H. V. Nanjundayya, C.I.E.

## Burma University.

During his visit to Rangoon in December 1916, H. E. the Viceroy said that proposals for a Burma University had long been under consideration and he hoped that a final settlement would soon be reached enabling the Province to realise its cherished aspiration.

Correspondence relating to the scheme and a draft Bill for the University was pub-

lished in April, 1916, together with an explanatory note by Mr. J. G. Covernton, Director of Public Instruction. Mr. Covernton says that the draft bill of 1913-14 has been entirely recast on the lines of the Hindu University Bill. While the complicated constitutional machinery of the Hindu University has not been adopted the principles of arrangement governing its

Bill have been followed. Thus the Bill itself, contains definitions and a statement of the various authorities and Officers of the University and of their functions, general provisions, regarding incorporation, tenure of property, administration of funds, admission of institutions, award of degrees and diplomas and clauses conferring emergency powers on Government and enabling the authorities stated to frame, amend or repeal statutes or regulations.

**Modified plans.**—A letter, dated the 2nd March from the Hon. Mr. C. M. Webb, I.C.S., Secretary to the Government of Burma to the President of the Educational Syndicate, Burma states: If it is considered essential that a university should be started on the scale originally contemplated it will be necessary to postpone its constitution until the requisite funds are available, but it is financially possible to commence a university at an early date on a modified scale, utilising the colleges which have already attained university standing and, with the addition of a central executive staff to proceed to create a small university on the lines suitable to the immediate requirements of the province. The Lieutenant Governor considers that a university on the modified scale suggested is not at all worthy of the province of Burma. It is, however, the only alternative to a postponement of the scheme

for a period which cannot at present be estimated.

**Practical Studies.**—On this practical ground His Honour is prepared to accept it if the Educational Syndicate approve of it as a temporary measure. It should be recognised that there is an unique opportunity in Burma of starting a university on new lines free from many of the traditions which have hampered university development in other Indian provinces. His Honour is disposed to think, on general grounds and with some reference to the needs of the province, that the Rangoon University may usefully be of more practical type than any yet attempted in India with the control and direction of full University course in arts and science, pure and applied, technology, medicine engineering, agriculture, law, forestry, veterinary science and training, commerce and arts and architecture. It may perhaps combine with University instruction practical studies at the Chief Court, the Pasteur Institute and the hospitals and also at the Museum which the local Government is committed to build as soon as funds are available. It is possible in Burma to a greater extent than in any of the older and more advanced provinces in India to concentrate the intellectual energies of the province in one immediate neighbourhood and to develop a really many-sided university.

## Dacca University.

With the modification of the Partition of Bengal announced by His Majesty the King Emperor at the Coronation Durbar at Delhi in December 1911, Dacca ceased to be the capital of the separate province of East Bengal. Nevertheless, it was decided that the interests of higher education in that part of the new Bengal Presidency demanded the creation of a separate University. His Majesty, in replying to the address of the Calcutta University on the 6th January 1912 had declared that it was his wish that there might spread over the land a network of schools and colleges, from which would go forth loyal and manly and useful citizens, able to hold their own in industries and agriculture and all the vocations of life. The proposal of a new University at Dacca was one of the first fruits of this Imperial declaration. The Government of India conveyed their decision to establish a University at Dacca in their letter to the Government of Bengal, dated the 4th April 1912, and the latter Government, by their Resolution, dated a month later, appointed a Committee to frame a scheme for the new University. The Committee was instructed therein that the proposed University should be of the teaching and residential and not of the federal type, and that it should be a self-contained organism unconnected with any colleges outside the limits of the city of Dacca.

The Committee consisted of Mr. R. Nathan, as Chairman, Mr. Kuchler, Director of Public Instruction, Bengal, Dr. Rash Behari Ghose, Nawab Sayid Nawab Ali Chaudhuri, Nawab Siraj-ul-Islam, Babu Ananda Chandra Roy, Mr. Mahomed Ali, Principal H. R. James, Principal W. A. J. Archbold, Mahamahopadhyaya Satish Chandra Acharji, Babu Lalit Mohun Chatterji, Professor C. W. Peake, Shams-ul-Ulama Abu Nasr Muhammad Waheed, and Mr. D. S. Fraser, as Secretary. The Committee made their report at the end of the year. They submitted a complete scheme with a financial estimate sufficiently detailed to enable the proposals to be laid before the Secretary of State. They proposed that the Dacca University should include the following departments:—Arts, Science, Islamic Studies, Law, Engineering, Medicine and Teaching. The department of **Islamic Studies** was intended to be a distinctive feature of the new University, which, it was believed, would be greatly appreciated by the Mahomedan community of Bengal. The University, it was proposed, should consist of six Arts Colleges, namely, the existing Dacca and Jagannath Colleges and in addition, a New Arts College, a Mahomedan College, a Women's College, and a College for the well-to-do classes; an Engineering College; a Teachers' College; a Law Department; a Department of



Medical Studies; and Post-graduate courses in Arts and Science. All Mahomedan students in residence would, it was proposed, join the Mahomedan College, but it would be open to a Mahomedan student who lived with his parents or guardians to enter any college on the same terms as other non-resident students. The inclusion of a **Women's College** in the scheme was justified on the ground that female education in Bengal was developing in so promising a manner that women students might fairly claim to share in the benefits of the new residential University. Before leaving the subject of Arts Colleges, reference should be made to the special provision which was made in the scheme for **Physical Education and training**. Every student was to receive individual care and physical training appropriate to his needs and constitution, and at the same time, every encouragement was to be given to outdoor games and sports, and to the healthy rivalry of inter-collegiate and University competitions. The social life of the proposed University was also provided for. The College for the well-to-do classes was intended to attract young men of the land owning and wealthy classes whom the ordinary colleges, it was thought, would not attract. A word of explanation is necessary as regards the medical and law departments proposed for the University. The idea underlying them was that the local conditions were not sufficiently developed for the immediate establishment of a Medical College and a Law College, and that, for some years to come the University should content itself with preparing students for the Medical and Law Degree examinations of the Calcutta University. The total cost of the full scheme was estimated at 53 lakhs of rupees, but deducting certain sums which were available from other sources the net cost

was put down at nearly 40 lakhs, exclusive of recurring charges. These were expected to involve a net total of about 6½ lakhs annually.

Before the scheme thus elaborated by Mr. Nathan's Committee could be taken in hand, the war broke out. The possibility of giving effect to the full scheme had to be abandoned but in reply to a question from the Hon. Mr. Ambika Charan Mohundar, the Government of Bengal stated at a recent meeting of the Bengal Legislative Council that a **modified scheme** costing 38 lakhs, capital and recurring charges included, as against 59 lakhs of the original scheme, would be taken in hand. The modified scheme will merely be the preliminary to carrying out the larger scheme. The following institutions will form the nucleus of the University; The Dacca College, the Jagannath College, the Mahomedans College, the Women's College, the Teachers' College, the Law Department, Department of Medical studies and Department of Islamic studies. Other institutions such as a new college, an Engineering College and a Department of Sanskrit studies which are included in the complete scheme have had to be omitted owing to the financial position. The construction of the building for the Mahomedan College will be postponed until funds are available for the inauguration of the larger scheme and it will be accommodated for the present in the old secretariat Building. Zoological, physiological and anatomical laboratories have also been omitted for the present but it is hoped to find temporary accommodation for them pending the construction of separate buildings. The legislation for the Dacca University will be introduced in the Imperial Council. The Government of Bengal have received no official information as to the date when it will be introduced.

## OTHER UNIVERSITY SCHEMES.

The proposed University for the **Central Provinces** is dealt with in the article on those Provinces (see p. 65-69). The scheme is still under the consideration of the Local Government.

## Local Self Government.

Throughout the greater part of India, the village constitutes the primary territorial unit of Government organisation, and from the villages are built up the larger administrative entities—tahsils, sub-divisions, and districts.

"The typical Indian village has its central residential site, with an open space for a pond and a cattle stand. Stretching around this nucleus lie the village lands, consisting of a cultivated area and (very often) grounds for grazing and wood-cutting. . . . The inhabitants of such a village pass their life in the midst of these simple surroundings, welded together in a little community with its own organisation and government, which differ in character in the various types of villages, its body of detailed customary rules and its little staff of functionaries, artisans and traders. It should be noted, however, that in certain portions of India, e.g., in the greater part of Assam, in Eastern Bengal, and on the west coast of the Madras Presidency, the village as here described does not exist, the people living in small collections of houses or in separate homesteads".—(*Gazetteer of India*.)

The villages above described fall under two main classes, viz.—

**Types of Villages.**—“(1) The ‘severalty’ or *raiayatwari* village, which is the prevalent form outside Northern India. Here the revenue is assessed on individual cultivators. There is no joint responsibility among the villagers, though some of the non-cultivated lands may be set apart for a common purpose, such as grazing, and waste land may be brought under the plough only with the permission of the Revenue authorities, and on payment of assessment. The village government vests in a hereditary headman, known by an old vernacular name, such as *putel* or *reddi*, who is responsible for law and order, and for the collection of the Government revenue. He represents the primitive headship of the tribe or clan by which the village was originally settled.

“(2) The joint or landlord village, the type prevalent in the United Provinces, the Punjab and the Frontier Province. Here the revenue was formerly assessed on the village as a whole, its incidence being distributed by the body of superior proprietors, and a certain amount of collective responsibility still, as a rule, remains. The village site is owned by the proprietary body, who allow residences to the tenantry, artisans, traders and others. The waste land is allotted to the village, and, if wanted for cultivation, is partitioned among the share-holders. The village government was originally by the *punchayet* or group of heads of superior families. In later times one or more headmen have been added to the organisation to represent the village in its dealings with the local authorities; but the artificial character of this appointment, as compared with that which obtains in a *raiayatwari* village, is evidenced by the title of its holder, which is generally *lambardar*, a vernacular derivative from the English word ‘number.’ It is this type of village to which the well-known description in Sir H. Maine’s *Village Communities* is alone applicable, and here the co-proprietors are in general a local oligarchy with the bulk of the village population as tenants of labourers under them.”

**Village Autonomy.**—The Indian villages formerly possessed a large degree of local autonomy, since the native dynasties and their local representatives did not, as a rule, concern themselves with the individual cultivators, but regarded the village as a whole, or some large landholder as responsible for the payment of the Government revenues, and the maintenance of local order. This autonomy has now disappeared owing to the establishment of local, civil and criminal courts, the present revenue and police organisation, the increase of communications, the growth of individualism, and the operation of the individual *raiayatwari* system, which is extending even in the north of India. Nevertheless, the village remains the first unit of administration; the principal village functionaries—the headman, the accountant, and the village watchman—are largely utilised and paid by Government, and there is still a certain amount of common village feeling and interests.

**Punchayets.**—For some years there was an active propaganda in favour of reviving the village council-tribunal, on *Punchayet* and the Decentralisation Commission of 1908 made the following special recommendations:—

“While, therefore, we desire the development of a *punchayet* system, and consider that the objections urged thereto are far from insurmountable, we recognise that such a system can only be gradually and tentatively applied, and that it is impossible to suggest any uniform and definite method of procedure. We think that a commencement should be made by giving certain limited powers to *Punchayats* in those villages in which circumstances are most favourable by reason of homogeneity, natural intelligence, and freedom from internal feuds. These powers might be increased gradually as results warrant, and with success here, it will become easier to apply the system in other villages. Such a policy, which must be the work of many years, will require great care and discretion, much patience, and judicious discrimination between the circumstances of different villages; and there is a considerable consensus of opinion that this new departure should be made under the special guidance of sympathetic officers.”

This is, however, still mainly a question of future possibilities, and for present purposes it is unnecessary to refer at greater length to the subject of village self-government. An Act was passed in 1912 to provide for the establishment of *punchayats* in the Punjab; but it was contemplated that the areas for which these bodies would be established would be larger than villages, and their functions are limited to the disposal of petty civil suits. In the Punjab, it may be mentioned, village self-government survives to a considerable extent, on a basis of custom, and the desirability of bringing it under statutory regulation has been questioned.

**Municipalities.**—The Presidency towns had some form of Municipal administration, first under Royal Charters and later under statute, from comparatively early times, but outside of them there was practically no attempt at municipal legislation before 1842. An Act passed in that year for Bengal, which was practically inoperative, was followed in 1850 by an Act applying to the whole of India. Under

this Act and subsequent Provincial Acts a large number of municipalities was formed in all provinces. The Acts provided for the appointment of commissioners to manage municipal affairs, and authorised the levy of various taxes, but in most Provinces the commissioners were all nominated, and from the point of view of self-government, these Acts did not proceed far. It was not until after 1870 that much progress was made. Lord Mayo's Government, in their Resolution of that year introducing the system of provincial finance, referred to the necessity of taking further steps to bring local interest and supervision to bear on the management of funds devoted to education, sanitation, medical charity, and local public works. New Municipal Acts were passed for the various Provinces between 1871 and 1874, which, among other things, extended the elective principle, but only in the Central Provinces was popular representation generally and successfully introduced. In 1881-2 Lord Elphinstone's Government issued orders which had the effect of greatly extending the principle of local self-government. Acts were passed in 1883-4 that greatly altered the constitution, powers, and functions of municipal bodies, a wide extension being given to the elective system, while independence and responsibility were conferred on the committees of many towns by permitting them to elect a private citizen as chairman. Arrangements were made also to increase municipal resources and financial responsibility, some items of provincial revenue suited to and capable of development under local management being transferred, with a proportionate amount of provincial expenditure, for local objects. The general principles thus laid down have continued to govern the administration of municipalities down to the present day. In several Provinces there are, besides municipalities, "notified areas" i.e., small towns which are not fit for full municipal institutions, but to which parts of the Municipal Acts are applied, their affairs being administered by nominated committees. These are to be regarded as embryo municipalities.

**Local Boards.**—The establishment of boards for dealing with local affairs in rural areas is a relatively recent development. No such boards existed in 1858, though some semi-voluntary funds for local improvements had been raised in Madras and Bombay, while in Bengal and the United Provinces consultative committees assisted the district officers in the management of funds devoted to local schools, roads and dispensaries. The system of raising cesses on land for purposes of this description was introduced by legislation in Madras and Bombay between 1865 and 1869; in the case of Bombay, nominated committees were to administer the proceeds of the cess. The year 1871 saw a wide development of legislation for local administrative purposes, partly due to growing needs, and partly the result of the financial decentralisation scheme of Lord Mayo's Government, various Acts being passed in different Provinces providing for the levy of rates and the constitution of local bodies, in some cases with an elected element, to administer the funds. The whole system was reorganised in accordance with the policy of Lord Elphinstone's Government. Under the Orders of 1881-2 the existing local committees were to be replaced by a system of boards

extending all over the country. The lowest administrative unit was to be small enough to secure local knowledge and interest on the part of each member of the board, and the various minor boards of the district were to be under the control of a general district board, and to send delegates to a district council for the settlement of measures common to all. The non-official element was to preponderate, and the elective principle was to be recognised, as in the case of municipalities, while the resources and financial responsibilities of the boards were to be increased by transferring items of provincial revenue and expenditure. It was, however, recognised that conditions were not sufficiently advanced or uniform to permit of one general system being imposed in all provinces, and a large discretion was left to Local Governments. The systems introduced in different parts of India by the Acts of 1883-5 (most of which are still in force) consequently varied greatly.

**Mofussil Municipalities.**—The total number of municipalities has altered little for many years past. New municipalities have been formed from time to time, but there have also been removals from the list. There was, indeed, a rather marked decrease according to the last decennial review (1902-12) and the number in 1911-12 was actually less than it was thirty years earlier. This result was brought about by the reduction to "notified areas" of a considerable number of the smaller municipalities in the Punjab and United Provinces. The figures showing the constitution of the municipalities call for little comment. Taking them as a whole, the proportion of elected members was in 1911-12 rather more than a half, whereas in 1901-02 it was slightly less. The proportions of non-officials and Indians, already high in 1901, also increased during the decade. Elected members are in the majority in the cities of Bombay, Madras and Rangoon and in Bengal (excluding Calcutta), Bihar and Orissa, the United Provinces, and the Central Provinces; in the North-West Frontier Province and Baluchistan, on the other hand, there are no elected members, and in Burma they form a small minority. Non-officials outnumber officials everywhere, and Indians outnumber Europeans to an even greater degree, except in Rangoon. Taking the municipalities individually, some of the commissioners are elected in the great majority of cases. Representation in the larger municipalities is in general by wards or classes of the community, or both. Voters must be residents not below a specified age, and property or status qualifications are generally laid down. The Chairman or President of the Municipal Corporation is sometimes nominated under the orders of the Local Government, but more often chosen by the commissioners from among themselves. The only provinces in which there has been in the past a large proportion of elected non-official chairmen are Madras, the Central Provinces, and the two Bengals; but Bombay has now to be added to the list, in view of the changes made in that province in the closing years of the decade. Various provisions exist as to the exercise of control by Government, particularly as regards finance and appointments. No loans can be raised without Government sanction, and generally speaking municipal budgets, and alterations in taxation, require the sanction of the Local

Government, or of a Commissioner. Proposals for giving municipal committees a larger degree of independence were put forward by the Decentralisation Commission, and some action on these lines has been taken. Government may provide for the performance of any duty which the commissioners neglect, and may suspend them in case of incompetence, default, or abuse of powers.

**Municipal Revenues.**—In the provinces in which octroi is levied generally, it is the most important source of income. The octroi duties have admitted disadvantages, but they are familiar through long usage to the inhabitants of the North and West of India. The possibility of abolishing them was under consideration during the last decade, and it was decided in the United Provinces to take this step in many municipalities, but the alternative of direct taxation is not a popular one. Precautions are taken to limit the tax to articles actually consumed in a town, and to prevent it from becoming a transit duty. The list of dutiable articles contains in each case only staple articles of local consumption and goods in transit are allowed to pass in bond or receive a refund of the duties on leaving the town. Articles of food are the most important class of goods subject to octroi taxation.

**Incidence of Taxation.**—A tax on houses and lands is levied to some extent in all provinces, and is the main source of municipal revenue where there is no octroi. Taxes on professions and trades, and on animals and vehicles, are generally levied, as also is a water-rate in the large towns that have been

furnished with water works. Tolls on roads and ferries and lighting and conservancy rates contribute to the receipts in most provinces. The average incidence of municipal taxation per head of municipal population in 1911-12, for British India, as a whole, was Rs. 2.95. Leaving out of account the Presidency towns, where the figures are higher, the provincial averages ranged from Rs. 3.08 in the North-West Frontier Province and Rs. 2.38 in the Punjab, to Rs. 1.35 in Madras and Rs. 1.02 in Coorg. Other sources of revenue are municipal lands and buildings, conservancy receipts (other than the rates), educational and medical fees, receipts from markets and slaughter-houses (a very important item in Burma), and interest on investments.

**Municipal Functions.**—Municipal functions are classified under the heads of public safety, health, convenience and instruction. Within these heads the duties are many and varied. Expenditure, apart from that on general administration and collection, which amounts to something less than 10 per cent. of the total, is similarly classified. The principal normal functions of municipalities now are the construction, upkeep, and lighting of streets and roads, and the provision and maintenance of public and municipal buildings; the preservation of the public health, principally with reference to the provision of medical relief, vaccination, sanitation, drainage and water-supply, and measures against epidemics; and education, particularly primary education. Money is raised by loan for water-supply and drainage schemes, the cost of which is too large to be defrayed from ordinary revenues.

## THE PRESIDENCY TOWNS.

The corporations of the Presidency towns occupy a special position, and are constituted under special Acts.

**Calcutta.**—The municipal administration of Calcutta is regulated by the Calcutta Municipal Act of 1899, which replaced an Act of 1888, the working of which had not been altogether satisfactory. The Corporation, as remodelled by the Act of 1899, consists of a Chairman, appointed by the local Government, and fifty commissioners, half of whom are elected at triennial ward elections, while the remainder are appointed, four each by the Bengal Chamber of Commerce and the Calcutta Trades Association, two by the Port Commissioners, and fifteen by the local Government. The Act also constitutes a smaller body, the General Committee, consisting of the Chairman with twelve of the commissioners, four elected by the ward commissioners, four elected by the other commissioners and four appointed by the local Government. There are various special committees and sub-committees.

The entire executive power is vested in the Chairman, to be exercised subject to the approval or sanction of the Corporation or General Committee, whenever this is expressly directed in the Act. To the Corporation are reserved the right of fixing the rates of taxation and such general functions as can be efficiently performed by a large body, while the General Committee stands between the deliberative and executive

authorities, and deals with those matters that are ill-adapted for discussion by the whole Corporation but too important to be left to the disposal of the Chairman alone. Power is reserved to the local Government to require the municipal authorities to take action in certain circumstances, and their sanction is required to large projects.

**Bombay.**—The municipal corporation of Bombay, which formed the model for the new Calcutta constitution, dates in its main features from 1872 and continues to be regulated by the Act of 1888 as amended. Some important changes were made by the City of Bombay Police Charges Act of 1907, which relieved the corporation of the police charges of the city, and made over to them in exchange further responsibility for primary education, medical relief and vaccination.

The Corporation consists of 72 councillors, of whom 36 are elected by wards, 16 by the justices of the peace, 2 by the Fellows of the University, and 2 by the Bombay Chamber of Commerce, the remaining 16 being appointed by Government. The general municipal government is vested in the Corporation, while the ordinary business is transacted by a Standing Committee of 12 councillors, 8 appointed by the Corporation and 4 by Government. The president of the corporation is elected by the councillors but is not, like the chairman of the Calcutta Corporation, an executive officer. The

chief executive authority is vested in a separate officer, appointed by Government, usually from the ranks of the Indian Civil Service, styled the Municipal Commissioner, who can, however, be removed by a vote of 45 councillors.

**Madras.**—A new Municipal Act for the City of Madras was passed in 1904. By this Act the number of the municipal commissioners, to whom as a body the name Corporation was now applied, was increased from 32 to 36, besides the President, and provision was made for the appointment of three commissioners each by the Madras Chamber of Commerce and the Madras Trades Association, and of two by such other associations, corporate bodies, or classes of persons, as the Local Government might direct, while the number to be elected as divisional elections was fixed at 20. Under the Act previously in force the total number of elected commissioners was not more than 24. The

remaining commissioners were appointed, as they are under the new Act, by the Local Government, who also appoint the President. The Act of 1904 also introduced various other changes in the law which need not be specially noticed; it was modelled to a large extent on the Calcutta Act of 1899. Executive authority is vested in the President, who is removable under the existing law, by a vote of 23 commissioners. A Standing Committee, consisting of the president and eight other commissioners, is mainly concerned with financial and building question. The President, like the chief executive officers in Calcutta and Bombay, is usually a member of the Indian Civil Service. The number of persons enrolled as voters in 1911-12 was 9,824 rather more than 6 per cent. of the total adult male population. The control of the Local Government over the municipality has hitherto been more stringent than in the other Presidency towns.

## DISTRICT AND LOCAL BOARDS.

The duties and functions assigned to the municipalities in urban areas are in rural areas entrusted to District and Local Boards. The systems of rural local government in the various provinces differ widely. The Madras organisation, which provides for three grades of local boards, most nearly resembles the pattern set in the original orders. Throughout the greater part of that province important villages and groups of villages are organised as "Unions", each controlled by a PANCHAYAT. These bodies receive the proceeds of a light tax on houses, and spend them mainly on sanitation. Next come the Taluk Boards, which form the agency for local works in the administrative sections into which the districts are divided. Finally there is the District Board, with general control over the local administration of the district. In Bombay there are only two classes of boards, for districts and TALUKAS respectively. In Bengal, the Punjab, and the North-West Frontier Province the law requires a District Board to be established in each district, but leaves the establishment of subordinate local boards to the discretion of the Local Government. The Bengal Act authorises the establishment of village Unions also, but this provision has not been very largely used. The United Provinces Act formerly in force directed the establishment of district and sub-district boards, but the latter were abolished, as mentioned below, in 1900. The system in the Central Provinces bears some resemblance to that which prevails in Madras, the villages being aggregated into "circles", and the circles into "groups", each of which has a Local Board, while for each district there is a District Council having authority over the Local Boards. In Assam district boards have not been introduced, and independent boards are established in each sub-division. Neither district nor sub-district boards exist in Burma, or in Baluchistan. District boards were started in Lower Burma in accordance with Lord Ripon's Local Self-Government Resolution of 1882, but the members took no active interest in them, and they died out after a few years. The district funds are now administered by the Deputy Commissioners of districts.

**Elective Principle.**—The degree to which the elective principle has been introduced varies greatly in different parts of India; but there is a considerable proportion of elected members everywhere, except in the North-West Frontier Province, where the system of election was abolished in 1903. On the whole, however, the principle of representation is much less developed in rural than in municipal areas. In Madras the elective system, previously applied to the district boards only, was extended to the Taluk Boards in 1900. In the United Provinces and the Central Provinces there is a substantial majority of elected members.

**Chairmen.**—The various Acts usually leave it to the Local Government to decide whether the Chairman of the district board shall be elected or nominated. In most provinces the Collector has, as a general rule, been appointed, though in the Central Provinces the president is elected, and is usually a non-official. In the United Provinces election, subject to the veto of the Local Government, was prescribed by the Act of 1906, but in practice the Collector is chosen. As regards the subordinate boards, the law and practice vary. Generally speaking, the sub-district boards are on the footing of subordinate committees or agencies of the district boards, with very limited powers and resources; but in Madras they exercise independent authority, subject to the general control of the district boards, in regard to the less important roads, primary education, medical work, and sanitation.

Provision is made, on much the same lines as in the case of municipalities, for the exercise of control in certain directions by Government or its officers.

**Sub-District Boards.**—The Decentralisation Commission, having in view the admitted failure of sub-district boards as a whole, under existing arrangements, except in Madras and Assam, put forward proposals for making them the principal agencies of rural board administration by giving them independent resources, separate spheres of duty, and large responsibilities. Proposals for giving the district boards a larger measure of independence were also put forward.

**Revenue and Expenditure.**—The sources of income open to rural boards are much narrower and less elastic than those of the municipalities. The greater part of their revenue is derived from a cess which they are empowered to levy on the land, and which usually does not exceed one anna in the rupee on the annual rent value (or, in ryotwari provinces, the Government assessment). The cess is ordinarily collected by Government agency along with the land revenue, and varies in amount with the latter. Since 1905 the income derived from the land cess has been supplemented by a special Government contribution calculated at the rate of 25 per cent. of that income. Sub-

stantial amounts, apart from this special contribution, are granted to the district boards by the Local Governments for various purposes. Apart from receipts in connection with their educational and medical institutions, and markets, the only other important sources of independent revenue are pounds and farries, and, in Madras, road tolls. Except in Madras, the sub-district boards have generally no independent sources of income, and merely receive such moneys as the District Boards may allot to them. In Madras the Taluk Boards receive half the land cess levied in their areas, as well as certain miscellaneous revenues.

**District and Local Boards.**—The following table shows the general constitution of the boards in each province, the figures in italics relating to local boards, the others to district boards. The figures are for 1914-16 :—

Province.	Number of Boards.	Total Number of Members.	By Appointment.			By Employment		By Race.	
			Ex-officio	Nominated.	Elected.	Official.	Non-Official.	Euro-peans.	Indians.
Madras .. .. .	23	779	124	293	362	279	500	130	649
	96	1,652	97	782	773	409	1,243	86	1,586
	26	553	126	182	245	132	421	71	482
Bombay .. .. .	215	3,121	526	1,205	1,392	530	2,553	138	2,985
Assam .. .. .	19	318	76	58	184	80	238	135	183
Bengal .. .. .	25	513	134	166	213	161	362	85	428
	72	851	63	384	407	97	757	37	817
Bihar and Orissa ..	18	390	109	130	151	124	266	128	262
United Provinces ..	11	499	61	314	124	79	410	70	499
	48	922	47	245	630	262	660	102	820
Punjab .. .. .	28	1,114	258	507	349	271	843	73	1,041
	13	283	14	79	190	14	269	8	281
N.-W. Frontier Province.	5	219	51	168	..	51	168	26	193
	21	521	..	149	381	67	454	13	508
Central Provinces and Berar.	81	1,315	..	347	896	151	1,192	9	1,334

### POLICY OF GOVERNMENT DEFINED.

The Government of India issued on April 28th, 1915, a long resolution dealing with the growth and future of local self-government in India. From what has gone before it will have been seen that the Decentralisation Commission made many and detailed recommendations on this question, and the intention of the resolution was to summarise policy on these points, as well as to complete the chain of pronouncements of policy which commenced with the education resolution and was followed by the sanitary resolution. Owing however to the wide diversity of conditions in India, and the extent to which local self-government must be a provincial question, it was not apparently possible to lay down broad and simple lines, especially as in the main the development of local self-government is a question of the provision of funds, and no one has suggested whence they shall come, except in the way of doles from the Imperial Exchequer, which is already overburdened. The Resolution was

therefore received with mixed feelings. Those who expected a declaration of a bold forward policy were disappointed, whilst those who realised the difficulties inherent in the working of the principle until some means of providing the necessary funds are devised realised that it went as far as possible in existing conditions.

The resolution commenced with the expression of opinion that the results on the whole have justified the policy out of which local self-government arose. The degree of success varies from province to province and from one part of a province to another, but there is definite and satisfactory evidence that of a growth of a feeling of good citizenship, particularly in the large towns. "On all sides there are signs of vitality and growth." Of the obstacles in the way of realising the ideals of the past the resolution placed in the forefront the smallness and inelasticity of the local revenues, then the indifference still prevailing in many places towards all forms of public life,

On a review, the Government of India decided to accept the view of the local-government or administration as to the degree of progress possible at the present time. Local Governments and Administrations, the resolution added, were prepared to advance in the direction of the main recommendations of the Decentralisation Commission.

Turning to details the resolution showed that of the 695 Chairmen of Municipalities 222 consisted of elected non-officials, 248 of elected officials, 51 of nominated non-officials, 174 of nominated officials. The election of non-official chairmen has long been urged by Indian politicians, and their views have been so far accepted that the majority of Local Governments are in favour of substituting, so far as possible, non-official for official chairmen. With regard to the larger municipalities, the Bombay system is now very much in favour. This consists in the main of a constitution under which an elected chairman is the mouth-piece of the corporation, whilst the head of the executive is an official nominated by Government but under the control of the Corporation. Whilst not pressing this system on all Local Governments, the resolution pointed out that it had the advantage of securing a continuous and strong executive administration by a paid staff, whilst maintaining the corporate control and activity of the municipal board. As to the financial resources of the municipalities, it was shown that the aggregate income of the 701 municipalities in existence at the close of 1912-13 (excluding the Presidency towns and Rangoon) amounted to £3,282,845, or Rs. 4,92,42,075 apart from extraordinary receipts, or an average of £4,688 or Rs. 70,245 a year. This shows a very rapid expansion. Contributions from Government have materially assisted this expansion. Since 1911, the Government of India have made grants amounting to £3,076,400 (Rs. 4,61,47,000), of which £368,800 (Rs. 55,23,000) are recurring, for urban sanitation. Municipalities have also received their share—the exact figure is not easily ascertainable—of the large educational grants made by the Government of India since 1911, amounting to about £3,987,800 (Rs. 5,98,17,000), of which £826,600 (Rs. 1,24,00,000) are recurring. Municipal boards have been relieved of all charges for the maintenance of police within municipal limits. In almost every province the recommendation that municipalities should be relieved from financial responsibility for famine relief and should receive assistance from Government in the case of severe epidemics, has been already given effect to, or the principle has been accepted. The Government of India have also accepted a further recommendation, namely, that assistance may legitimately be given by Government to poorer municipalities which, without it, would be unable to carry on the normal standard of administration required from them.

On the very important subject of financial control, which is sometimes described as minute the Government of India suggested that the municipalities should have a freer hand with regard to their budgets, the only check being the maintenance of a prescribed minimum

balance. They held this out as the policy which should steadily be kept in view.

The Decentralisation Commission recommended that sub-district boards should be universally established and that they should be the principal agencies of rural administration. The Government of India left this question to the discretion of the Local Governments. The Local Governments favoured a policy where district and sub-district boards should contain a large preponderance of elected members. They took the view, in which the Government of India concurred, that an official should remain chairman of every district and sub-district board. The total number of district and sub-district boards in 1913 was 199 and 536 respectively, with an aggregate income of £3,787,219 (Rs. 5,68,08,292). In the same year they received specially large grants from the sums allotted by the Imperial Government for education and sanitation. The resolution analysed at some length the proposal that district boards should be empowered to levy a railway or tramway cess, in order to expedite the improvement of communications. The Government of India have empowered district boards to levy a special extra land cess of three pils in the rupee on the annual rent value of land for the construction of light railways or tramways, conditional on the proposal obtaining the assent of three-fourths of the members of the board. The Government of India also decided that the board could issue debentures secured on the railway property when its accumulated funds were insufficient to bar the cost of construction. They also recommended that the present restrictions on the financial powers of the boards should be gradually relaxed, in the direction of securing full discretion subject to the maintenance of the prescribed working balance.

Turning to the organisation of the villages the resolution expressed the views of the Government of India towards the establishment of panchayats in the following passage:—"where any practicable scheme can be worked out in co-operation with the people concerned, full experiment should be made on lines approved by the local government or administration concerned." With this general recommendation they left the matter to the local authorities. With regard to the **Presidency Corporations**, the Decentralisation Commission recommended that the Bombay system of an unofficial chairman and an official head of the executive should be generally followed. Bengal and Madras agreed generally with the proposal, but Rangoon regarded it as unsuitable to the conditions there obtaining. The Government of India declined to endorse the suggestion that a **Local Government Board** should be formed in each Province for the control of the local bodies. In conclusion, the resolution summarised the policy of the Government of India towards the development of local self-government as one of prudent boldness, calculating risks but not afraid to take them in the cause of progress.

Since this resolution was issued the Bombay Government has appointed a strong mixed committee to consider the whole question of local self-government in the rural areas, whose report is awaited with great interest.

## Local Government Statistics.

**Municipalities.**—With this general introduction we can now turn to the statistical results of the working of Local Self Government. The following table gives information as to the constitution of municipal committees, taxation, &c., in the chief provinces in 1914-15:—

	Population within Municipal Limits.	Number of Municipalities.	Total Number of Members.	By Qualification.			By Employment.		By Race.		Incidence of Municipal Taxation per head.
				Ex-Officio.	Nominated.	Elected.	Officials.	Non-Officials.	Europeans.	Indians.	
Presidency Towns.											
Calcutta	..	..	50	—	25	25	4	46	16	34	13 0
Bombay	..	..	72	—	16	56	8	64	17	55	14 8
Madras	..	..	36	1	15	20	5	31	13	23	5 2
Rangoon	..	..	25	1	6	19	3	22	13	12	15 4
District Municipalities.											
Bengal	..	..	1,526	110	539	886	135	1,341	150	1,376	3 3
Bihar and Orissa	..	..	775	87	217	471	107	668	99	676	1 8
Assam	..	..	211	41	102	68	54	157	39	172	2 5
Bombay and Sind	..	..	2,161	386	807	968	454	1,707	122	2,039	3 4
Madras	..	..	980	76	400	504	181	799	139	850	2 2
United Provinces	..	..	1,147	202	90	855	166	981	117	1,080	2 3
Punjab	..	..	1,174	219	406	540	241	933	96	1,078	3 3
N. W. Frontier Province	..	..	6	36	83	..	36	83	19	100	4 4
Central Provinces and Berar..	..	..	764	13	268	483	161	(a) 601	63	699	2 11
Burma	..	..	561	181	281	99	201	360	155	406	3 5

(a) There were 2 vacancies amongst non-officials on the 31st March 1915.



## Sanitation.

The history of the sanitary departments in India goes back for about fifty years. During that period great improvements have been effected in the sanitary condition of the towns, though much remains to be done, but the progress of rural sanitation which involves the health of the great bulk of the population has been slow, and incommensurate with the thought and labour bestowed on the subject. "The reason lies in the apathy of the people and the tenacity with which they cling to domestic customs injurious to health. While the inhabitants of the plains of India are on the whole distinguished for personal cleanliness, the sense of public cleanliness has ever been wanting. Great improvements have been effected in many places; but the village house is still often ill-ventilated and over-populated; the village site dirty, crowded with cattle, choked with rank vegetation, and poisoned by stagnant pools; and the village tanks polluted, and used indiscriminately for bathing, cooking and drinking. That the way to improvement lies through the education of the people has always been recognised."

Of recent years the pace has been speeded up as education progressed, education developed, and funds were available. In a resolution issued in May 23rd, 1914, the Government of India summarised the position at that time, and laid down the general lines of advance. This resolution (*Gazette of India*, May 25th, 1914) should be studied by all who desire to understand the present position and policy: its main features are summarised here.

The governments in India have moved more rapidly of late. In 1898, the Government of India issued an important statement of policy. In 1908, Imperial grants amounting to Rs. 80,00,000 (£200,000) a year were made to local Governments. A new department of the Government of India was created in 1910 in order to relieve the Home Department of education, sanitation and some other branches of the administration. In addition to sanitary conferences held by local Governments, three All-India sanitary conferences were convened at Bombay, Madras and Lucknow, respectively, over which the Hon'ble Sir Harcourt Butler presided as Member of the Governor-General's Council in charge of the department concerned. These conferences were attended by non-officials as well as officials, by laymen as well as professional sanitarians. Again, the Indian Re-

search Fund Association has been founded to further the prosecution of research, and the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases. To this fund the Government of India make an annually recurring grant of 5 lakhs of rupees (£33,333). Moreover, since the constitution of the new department of the Government of India, Imperial grants have been made to local Governments and Administrations to the amount of Rs. 4,61,47,000 (£3,076,466), of which Rs. 55,23,000 (£368,200) are recurring, and Rs. 4,06,24,000 (£2,708,266) non-recurring. In addition, grants amounting to Rs. 82.33 lakhs (£548,866) a year have been made to district boards in certain provinces, a substantial portion of which will, it is hoped, be expended on rural sanitation. These grants have rendered practicable the execution of schemes which a few years ago seemed beyond the limits of financial possibility; and there can be little doubt that the movement for sanitary reform is now well established and progressive throughout the country.

**Organisation.**—As a result of the Plague Commission's Report Lord Curzon's Government took up with vigour the reorganisation of the sanitary department. Research institutes were started and an appointment of Sanitary Commissioner with the Government of India was created. The functions of this officer were to advise the Government of India upon sanitary and bacteriological questions to settle with local Governments the principles on which an advance should be made and to organise and direct research throughout India. The arrangement was not completely successful. Among the disadvantages, the separation of research from clinical work deterred men from entering the department, and the office work in connection with research prevented the Sanitary Commissioner from undertaking wide and constant touring. The organisation was accordingly modified in 1912. The Sanitary Commissioner is now the independent adviser to the Government of India in all technical and sanitary matters, but all questions of personnel as well as the administration of the bacteriological department and research generally have been placed under the control of the Director-General, Indian Medical Service, with the Sanitary Commissioner as his staff officer.

### The Sanitary Organisation.

The sanctioned strength of the superior sanitary organisation in India now is

(a) A Sanitary Commissioner with the Government of India.

(b) A bacteriological department comprising—

(i) thirteen laboratory appointments distributed as follows:—

Central Research Institute	.. ..	1 Director and 3 Assistants.
Bombay Bacteriological Laboratory	.. ..	1 Director and 2 Assistants.
King Institute of Preventive Medicine, Madras	.. ..	1 Director and 1 Assistant.
Pasteur Institute, Kasauli	.. ..	1 Director and 1 Assistant.
Pasteur Institute, Coonoor	.. ..	1 Director and 1 Assistant.

(ii) fifteen new appointments recently sanctioned for the prosecution of research work and direct investigation in the field.

(c) The following establishments under local Governments :—

Province.	Sanitary Commissioners.	Deputy Sanitary Commissioners.	Health Officers, Sanitary Engineers.			
			1st class.	2nd class.	Sanitary Engineers.	Deputy or Assistant Sanitary Engineers.
Madras .. .. .	1	3	12	19	1	6
Bombay .. .. .	1	5	4	9	1	..
Bengal .. .. .	1	5	6	17	1	2
United Provinces .. .. .	1	4	11	17	1	3
Punjab .. .. .	1	2	2	5	1	1
Burma .. .. .	1	2	4	16	1	2
Bihar & Orissa .. .. .	1	3	2	8	1	2
Central Provinces .. .. .	1	..	..	2	1	..
Assam .. .. .	1	1	..	..	1	..
North-West Frontier Province .. .. .	1	1	1	1	..	..
Delhi .. .. .	1	..	3	..	1	..
Total .. .. .	11	26	45	94	10	16

**Provincial Agency.**—In their resolution, dated the 23rd May 1912, the Government of India provided for a large increase in the number of Deputy Sanitary Commissioners and for the appointment of health officers (of the first-class for larger municipalities and of the second-class for the smaller towns) on the lines of detailed proposals received from local Governments. Twelve additional appointments of Deputy Sanitary Commissioner, thirty-five appointments of health officer of the first-class and a large addition to the number of second-class health officers were sanctioned in 1912 and 1913, the entire cost of the additional Deputy Sanitary Commissioners on the basis of the scale of pay fixed for Indians and half the cost of the health officers being met by Imperial grants. The Government of India also advised local Governments to take powers, where these did not exist, to require a municipality to appoint a health officer and to veto the appointment of an unfit person. Such powers already exist in the Bombay Presidency, and have recently been taken by legislation in Bengal. Simultaneously, the Government of India recommended the system in force in Madras whereby every municipality is required to employ one or more trained sanitary inspectors in proportion to population. Sanitary inspectors are now being employed in large numbers in towns. In addition, the civil surgeon in every district is the sanitary adviser of the local authorities and in most provinces controls the vaccination staff. The provision of an increased staff of sanitary engineers is engaging urgent attention.

**Voluntary Agency.**—The Government of India attach great importance to the organisation of voluntary agencies and have recently made a grant of Rs. 20,000 (£1,333) a sum equivalent to that given by the Bombay Government to the BOMBAY SANITARY ASSOCIATION, which was founded in 1903, and now has corresponding branches in several districts and Native States.

**Research.**—The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation. The creation of an Imperial depart-

ment is no departure from that policy, and the large Imperial grants already mentioned have been made without any interference with provincial Governments. While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local Governments. The Sanitary Commissioner with the Government of India is a touring officer empowered to consult and confer informally with local Governments and their officers upon matters connected with sanitation. He is not permitted to encroach upon the authority of Local Governments over the officers under their control.

**Provincial Officers.**—The position of Provincial Sanitary Commissioners towards the administrative heads of the medical department varies somewhat in different provinces. The Government of India do not wish to interfere with the arrangements which local Governments may consider best suited to local conditions but they desire to insist on the importance of defining the functions of the two officers and securing to the Sanitary Commissioner the position of responsible technical adviser to the local Government in all matters affecting public health.

**Sanitary Boards.**—In every province, sanitary boards have been composed with varying powers, some being merely advisory, others having authority to sanction schemes and allot funds. These boards are composed of officers belonging to the medical, sanitary, engineering and other branches of the civil services with the addition of non-officials. The Government of India view with favour and confidence the devolution of financial authority and responsibility to these boards, and they commend to local Governments the appointment of a permanent salaried secretary to the board where this has not been done. They believe that such an appointment, wherever made, has resulted in an increase of efficiency.

**Training.**—Arrangements for training the superior sanitary staff are now engaging the attention of the Government of India. The chief difficulty at present is to provide courses

in practical hygiene and in the study of the bacteriology and etiology of tropical diseases. It is hoped in the near future to make arrangements in India for the former and to utilise the schools of tropical medicine at Calcutta and elsewhere for the latter. Meanwhile, a British diploma in public health is required from candidates for the post of Deputy Sanitary Commissioners and health officers of the first class. The problems of public health in India are vitally complicated by the fact that biting insects are a prominent factor in the dissemination of disease and it is obviously desirable to provide in India, as soon as possible, a complete course of training for sanitary officers.

Training classes for sanitary inspectors are now held in all the more important provinces.

**Department of Public Health** A substantial beginning has thus been made for the development of a department of public health and Indians have been freely enlisted for it. The posts of Deputy Sanitary Commissioners and health officers are now open to Indians. Nine Deputy Sanitary Commissioners out of 26 and the majority of health officers are Indians. The new bacteriological department consisting of 28 officers is also open to duly qualified Indians.

As health officers and Sanitary Engineers gradually relieve Deputy Sanitary Commissioners of much of the drudgery of inspection and routine work, it is hoped that the latter will be set free to deal with epidemics and communicable diseases from a higher plane, and to consider issues of public health wider than those which they are able to review to-day. It is therefore important to provide in advance free interchange between them, the laboratory workers and those carrying out practical research in the field.

**Progress of Research**—Research is slowly lifting the veil which hides the secrets of disease and mortality and opening up fields of inquiry scarcely thought of a generation ago. The discovery by Sir Ronald Ross of the part played by the mosquito in the communication of malaria and the appointment of the Plague Commission in 1898 are landmarks in the history of Indian Sanitation. In 1902, a research institute was founded at Gulindy in Madras, named the King Institute after Lieutenant Colonel King, C.I.E., I.M.S., in view of his devoted efforts in the cause of sanitation in that presidency. In 1905 Lord Curzon's Government summed up the position and the policy of the Government of India in regard to the establishment of laboratories for the study of problems of public health in India. The functions of the central laboratory were original research, the preparation of curative sera and the training of scientific workers. The functions of the provincial laboratories were diagnosis and special research connected with local conditions. This policy has been steadily developed. The Central Research Institute has been established at Kasauli. The Plague Research Laboratory at Parel has been extended and re-equipped and is now the bacteriological laboratory for the Bombay Presidency; and a proposal is under consideration to attach to it a school of tropical medicine. A research laboratory and school of tropical medicine are under construction at Calcutta. Pasteur Institutes

exist at Kasauli and Coonoor. A third is about to be established in Burma, and it is under discussion to establish others in Assam (where it will be combined with a research laboratory) and Bombay.

Besides the routine work connected with the bacteriological diagnosis of disease, anti-rabic treatment, the manufacture of various vaccines and sera and general research, these laboratories at different times have been the centres of many special investigations, notable amongst which are those on plague and enteric fever. It is hoped that before long each province in India will have a laboratory fully equipped for research.

**Research Fund Association.**—The foundation of the Indian Research Fund Association in 1911 has marked an important era in sanitary progress. The control and management of the association are vested in a governing body, the president of which is the Member in charge of the Education Department of the Government of India. The governing body is assisted by a scientific advisory board, of which not less than three members have seats on the governing body. They examine all proposals for work in connection with the scientific objects of the association and report as to their importance and feasibility. The members of this board are appointed for one year, but are eligible for re-election, and they have power to add to their number. The present members are the Director-General, Indian Medical Service, the Sanitary Commissioner with the Government of India, the Director of the Central Research Institute at Kasauli, the Officer in charge of the Central Malarial Bureau and the Assistant Director-General, Indian Medical Service (Sanitary). Sir Ronald Ross has been elected an honorary consulting member. The membership of the Indian Research Fund Association is open to non-officials. Every donor of Rs. 5,000 is entitled to become a permanent member, while every subscriber of Rs. 100 per annum can be a temporary member. Members of the association are entitled to attend and take part in the annual general meeting of the association and to receive copies of the reports and other publications issued from time to time by the association. Although, so far, the fund has been financed solely by the Government of India, it is hoped that in time Indian philanthropists will contribute towards the expansion of the association by founding chairs of research by financing experimental research measures and otherwise.

**Work of the Association.**—The association has been active and an already point to some achievement. Out of an income of Rs. 15 lakhs (£1,00,000) received since its incorporation and up to the end of 1913-14, an expenditure of over Rs. 14 lakhs (£93,333) has been sanctioned. In 1911, Major S. P. James, I.M.S., was deputed to study yellow fever in its endemic area and to draw up proposals for protecting India against the introduction of the disease. Those proposals are still under consideration. In the meanwhile, *Stegomyia* surveys have been carried out in Calcutta, Bombay, Madras, Karachi and Rangoon and other seaports. Anti-malaria schemes based on preliminary surveys have been carried out at a cost of Rs. 6,02,000 (£40,133). Investigations are at pre-

sent in progress into the problems connected with the prevalence of cholera, kala-azar, dysentery, leprosy and goitre, as well as inquiries into the pharmacology of cinchona derivatives, the use of hydrocyanic acid gas as a pulicide and the fixation of chemical standards of purity for milk and milk products. Other investigations are under consideration regarding bacteriological standards of purity for water supplies, the different anti-cholera vaccines and sera, the methods of water filtration and silt removal best suited to Indian conditions, and the etiology of diabetes and the fevers of short duration. These will be started so soon as more trained research workers are available. It is hoped also to carry out, during the next non-epidemic season, an experiment in plague prevention on a large scale.

Besides financing the investigations conducted by its own staff, the association gives grants-in-aid to outside research on approved lines. The co-operation of other workers has been sought, and every encouragement has been given to them. Grants for research have been made, for instance, to Professor MacMahon, Dr. Hossack and Mr. Howlett. The services of Indians have also been enlisted. Dr. Korke is engaged in an important investigation into kala-azar, while Mr. Awati, a medical entomologist, is employed under the association. The Government of India cordially approve the policy of encouraging private enterprise in the cause of research.

The association has also started a journal for the publication of medical research work done in India—the "INDIAN JOURNAL OF MEDICAL RESEARCH"—published quarterly. The favourable reception which has been accorded to the first three numbers is evidence of the increased interest that is being taken in sanitary science in India to-day.

The investigations enumerated above represent the work directly under the supervision of the Government of India. The local Governments also are fully alive to the importance of research, and in seven provinces nine special officers are at present engaged in investigating the causes underlying the local prevalence of malaria and devising suitable schemes for the mitigation of that disease.

**Water Supply.**—Few subjects have received more attention of late than the provision of a piped supply of filtered water in towns. Complete figures are not available but sums amounting to at least Rs. 3,51,58,297 (£2,343,886) have been spent during the last 20 years on completed schemes. Projects costing Rs. 1,10,03,433 (£833,562) are under construction and projects costing Rs. 1,14,44,750 (£762,983) have been prepared and sanctioned. These figures are exclusive of the expenditure in the Presidency towns and Rangoon.

**Drainage.**—Drainage schemes on modern lines, are the basis of all sanitary improvement in urban areas. The demand for them is scarcely less than that for piped water and is steadily on the increase. As in the case of water supply complete figures are not available but the known expenditure during the last twenty years has been considerable and is now rapidly increasing. The expenditure on completed works outside the Presidency towns and Rangoon

during that period amounted to Rs. 97,65,049 (£851,003), whereas the cost of the works under construction is estimated at Rs. 1,54,20,502 (£1,028,033). In the beginning precedence over drainage was given to piped water-supply but experience has demonstrated the advantage of introducing both concurrently. Without drainage there is no means of carrying off the surplus water and without piped water-supply it is difficult to flush the drains properly.

When drainage schemes on modern lines were first started in this country, there seems to have been a bias against the use of sewers, and, wherever possible, open drains were adopted. Experience has shown that the preference for the open drain and the fear that sewers would give excessive trouble were not well founded. On the contrary, much of the advantage of a drainage system is lost if only open drains are used, as the old system of hand-carriage latrines has to be continued. Moreover, economy in establishment is possible only in the case of a sewage system.

**Pilgrimages.**—Pilgrimages necessitating as they do the collection of large numbers of persons, often more than a million, at one place at one time have an important sanitary aspect mainly in connection with cholera and other communicable diseases. The Government of India recently decided to examine the sanitary arrangements at the chief places of pilgrimage throughout India and local Governments were asked to appoint provincial committees for this purpose under the presidency of the Sanitary Commissioner with the Government of India with a view to formulate practical schemes of improvement. The inquiry is still in progress but the Government of India have already made a grant of Rs. 2 lakhs (£13,333) and promised an additional grant of 4 lakhs of rupees (£26,000) spread over four years towards the improvement of the pilgrim route to Badrinath; and they have made a further recurring grant of Rs. 20,000 (£1,333) a year for the same object. The important question of improving the conditions of the pilgrimage to the Hedjaz by Indian Muslims is undergoing close scrutiny. The Governor-General in Council anticipates that these inquiries will lead to signal sanitary improvements and promote the convenience and comfort of many millions of His Majesty's loyal Indian subjects.

**Rural Sanitation.**—The following observations are based on practical experience of rural sanitation—

- (a) Travelling dispensaries may be used to spread a knowledge of the simple facts regarding the more common diseases. For this purpose the sub-assistant surgeons in charge should be given a special training in hygiene. Once they become known to the people as healers of the sick their advice as sanitarians may become more acceptable.
- (b) The improvement of the village water-supply is as important as it is difficult. Apparently, excellent results have been obtained by disinfection of wells with permanganate of potash. Experiments are being made in different

parts of India in the use of tube-wells, etc. It might serve as an useful object lesson to use pumps and tube-wells for the provision of water at fairs, schools, hospitals, and local public offices. In some localities, a tank supply alone is possible and the difficulty is to protect even new tanks from pollution.

(c) In several provinces, notably in Madras, village unions or circles have been formed and their committees entrusted with small grants for the improvement of the sanitation of the village site. This measure might be extended experimentally elsewhere. It is calculated to encourage discussion and inquiry regarding sanitary work.

(d) Village midwives are, in some districts, encouraged by small grants of money and rewards to attend at the headquarters hospital for a short and simple

course of training. These measures open up possibilities with reference to a reduction in infantile mortality and children's diseases generally.

(e) In most districts in India, the civil surgeon is also in theory the sanitary officer of the district. His duties at head-quarters, however, do not allow him to tour and inspect in the district to the extent that is necessary; even in the case of epidemics in the district it is sometimes not possible for him to leave headquarters. In some provinces, district sanitary officers have been appointed and there can be little doubt that many more such appointments are required and that one of the most urgent and hopeful measures for promoting rural sanitation is the appointment of well qualified and whole-time district health officers to control and organise all sanitary arrangements and experiments in the district.

**Birth and Death Rates.**—The population of the areas in which births and deaths were registered was 238,522,770, according to the census of 1911, and the number of births registered in 1914 was 39·6 per mille, compared with 39·37 per mille in 1913, and an average of 38·61 per mille in the five years 1909-13. The total number of deaths was 7155·771=3000 per mille, as compared with 28·72 per mille in 1913 and 30·91 for the five years 1909-13. The rates for the provinces are given in the following table :—

Province.	Birth Rates (per mille).		Death Rates (per mille).					
	1913.	1914.	1913.			1911.		
			Urban.	Rural.	Total.	Urban.	Rural.	Total.
Delhi .. ..	44·8	48·0	44·2	35·1	40·0	42·1	32·5	38·0
Bengal .. ..	33·7	33·9	24·9	29·7	29·4	24·7	32·0	31·6
Bihar and Orissa .. ..	42·1	42·3	27·5	29·2	29·1	28·8	24·3	28·3
Assam .. ..	33·1	32·9	21·2	27·8	27·7	22·2	24·7	24·7
United Provinces .. ..	47·7	44·9	39·3	34·5	34·8	40·8	32·9	33·5
Punjab .. ..	45·4	46·3	35·6	29·7	30·2	36·9	31·5	32·0
N. W. Frontier Province .. ..	36·2	32·7	24·3	24·7	24·6	29·0	25·4	25·7
Central Provinces and Berar .. ..	49·3	51·4	30·9	30·2	30·3	39·3	36·4	36·7
Madras .. ..	32·2	33·5	26·2	20·8	21·4	30·4	24·2	25·0
Coorg .. ..	25·0	26·2	47·6	32·6	33·5	54·1	32·8	34·0
Bombay .. ..	35·0	37·4	32·9	25·4	26·6	33·8	28·6	29·5
Burma Lower .. ..	31·7	31·7	32·9	22·2	23·6	33·5	21·5	23·0
Burma Upper .. ..	34·2	36·7	39·3	26·5	27·6	41·3	24·9	26·2
Ajmer-Merwara .. ..	43·2	46·9	30·7	23·9	25·8	37·1	27·7	30·3
Total .. ..	39·4	39·6	31·0	28·5	28·7	33·2	29·5	30·0

The excess of births over deaths ranged from 15 per mille in the Central Provinces to 2·3 per mille in Bengal. The mean percentage of male to female births ranged from 121·2 in the North-West Frontier Province to 104 in Bihar and Orissa, and Delhi.

The greatest mortality occurred in December, while the lowest was in July. Infantile mortality was highest among the major provinces in the Central Provinces, the United Provinces and Upper Burma; the total rate per mille for all India was 219 male and 204 female; strenuous efforts are being made to reduce these figures.

**Urban Vital Statistics.**—The following table gives the ratio of deaths per mille in cities of British India whose population exceeded 150,000 in 1911:—

	Death Rate per Mille.			Death Rate per Mille.	
	1908-12 (Mean Rate).	1914.		1908-13 (Mean Rate).	1914.
Calcutta ..	29.0	28.4	Delhi ..	43.7*	42.1
Bombay .. ..	37.5	32.7	Lahore .. ..	32.7	33.2
Madras .. ..	40.6	47.1	Cawnpore ..	53.0	48.2
Lucknow .. ..	61.8	38.2	Agra .. ..	29.7	22.4
Rangoon .. ..	38.2	33.3	Ahmedabad ..	53.5	41.7
Howrah .. ..	28.4	35.7	Allahabad ..	21.9	28.5
Benares .. ..	58.2	50.7	Amritsar ..	50.4	45.4

\* Rate for 1912.

**Chief Diseases.**—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy widely prevail. Much of the sickness and mortality is due to deficient powers of resistance and to insanitary habits and surroundings. The table below shows the number of deaths from each of the principal diseases recorded in British India and the death-rates per 1,000, during the three years from 1912 to 1914.

Years.	Small-pox.	Cholera.	Fevers.	Dysentery and Diarrhoea.	Plague.	Respiratory Diseases.
1912 .. .. {	89,357	407,769	3,936,085	292,216	268,037	247,736
	37	1.71	16.50	1.22	1.10	1.04
1913 .. .. {	98,155	204,815	3,983,112	246,578	198,456	237,229
	41	1.24	16.71	1.03	.83	1.00
1914 .. .. {	70,590	280,770	4,092,459	278,225	266,474	261,149
	32	1.18	17.16	1.16	1.12	1.09

With regard to special diseases, cholera is much less prevalent than formerly. In 1914 it occurred chiefly in Bengal and Madras. Plague forms the subject of a separate section. When reference is made to "fever" in India, malarial fever is generally understood, but many causes of death and many diseases much more fatal than malarial fever are included under the heading. The fever death-rates, as usual, varied greatly, ranging in the major Provinces from 23.4 in Bengal to 7.7 in Madras. The malaria section of the Indian Research Fund Association is housed at Kasauli, but has a field-laboratory in Delhi where classes are held. In 1913, 58 doctors underwent instruction at these classes. Anti-malarial operations and mosquito surveys are being carried out by special officers in practically all the provinces. It has been proposed to send a small deputation to study anti-malarial measures in Italy. The measures adopted to fight malaria are the sale of quinine at cheap rates and the extirpation of mosquitos by such methods as drainage, petroleum and jungle clearing.

**Vaccination.**—The total number of vaccinations performed among the civil population during 1914-15 was 9,462,601, being a decrease from the previous year's work. Of primary vaccinations 95.56 per cent. and of re-vaccinations 68.38 per cent., were successful; about 34.19 per mille of the population were successfully vaccinated. The number of infants successfully vaccinated was 44.9 per cent. of the number under a year old. Arm-to-arm vaccination has of late years been steadily replaced by the use of pure calf lymph. All the larger provinces have, or will shortly have, their own calf-lymph depots.

**Plague.**—The present epidemic of plague in India first broke out at Bombay in August 1896, and, as the table below shows, it has been responsible for a heavy rate of mortality since that date. In 1907 the deaths from plague attained the highest total yet recorded, viz., 1,315,892, for India as a whole, the number in British India alone being 1,166,223, or 5.16 per mille. In 1908 the mortality declined enormously falling to 156,480, the lowest total since 1900. In 1909 there was once more a relatively low mortality, viz., 178,808 deaths, or fewer than in any year since 1900, excepting 1908. In 1910 and 1911 there was a severe recrudescence, especially in Bengal, the United Provinces, and the Punjab. In the latter part of 1911 and in 1912 the virulence of the epidemic abated, and the 1913 figures show a still further fall. In 1914 there was a rise, owing to a recrudescence of the disease in Bombay, and in 1915 there has been a serious recrudescence in the Punjab.

Plague is so local in its visitations that all general and unanalysed statistics are likely to prove misleading. Many parts of India have been almost entirely free from its ravages, and in the greater part of the country the outbreaks cannot be described as having been severe or disastrous. On the other hand, general statistics tend to conceal the severity of the distress caused by the disease in particular districts. In some parts of the Punjab and the United Provinces the mortality has been specially severe.

1896-97	..	..	..	57,543	1906	..	..	..	356,721
1898	..	..	..	116,285	1907	..	..	..	1,315,892
1899	..	..	..	139,009	1908	..	..	..	156,480
1900	..	..	..	92,807	1909	..	..	..	178,808
1901	..	..	..	282,027	1910	..	..	..	512,605
1902	..	..	..	576,365	1911	..	..	..	846,873
1903	..	..	..	883,076	1912	..	..	..	306,488
1904	..	..	..	1,143,903	1913	..	..	..	217,869
1905	..	..	..	1,060,140	1914	..	..	..	295,897

The reasons for this uneven incidence are at present somewhat obscure. The mortality in Eastern Bengal and in Assam has been at no time appreciable, largely, it is believed, because the habits of the people and the structure of their houses are unfavourable to the breeding of rats, while in the Madras Presidency and in Burma the epidemic has never reached serious dimensions. How far the comparative immunity of Madras is due to a policy of segregation and surveillance, and how far to climatic conditions is undecided.

The Advisory Committee on Plague Investigation in England and the Plague Commission in India, whose constitution has been described in former issues of this Report, have concluded their investigations, which have led to most important results. The main facts in regard to the mode of propagation of an epidemic and the life history of the plague bacillus have been ascertained and rational methods of attack have thus been made possible. It is now generally agreed: (1) That epidemic bubonic plague in man is directly dependent on epidemic plague in rats; (2) that the vehicle of contagion between rat and rat and between rat and man is the plague-infected rat-flea; (3) that bubonic plague is not directly infectious from man to man; and (4) that the life of the plague bacillus outside the bodies of men, animals, or fleas is of short duration. In large towns plague may persist through the year, but in villages such persistence is exceptional, and the recurrence of an epidemic is probably due to fresh infection.

In the light of the knowledge and experience now acquired it is possible to deal satisfactorily with the disease when effective control can be established over the sanitary conditions; and in the case of the native army and in limited areas such as jails there has been remarkable success. But attempts to establish such control over large areas would involve too great an interference with the habits, prejudices, and sentiments of the people, and the application of measures of proved utility must depend upon the particular circumstances of each locality and upon the character of its inhabitants. In the face of great practical obstacles, three principal measures for combating plague are now adopted:—

(1) The temporary evacuation of quarters in which plague is prevalent. (2) Inoculation with the prophylactic fluid. (3) The systematic destruction of rats.

**Hospitals, Dispensaries, Asylums.**—The following table gives figures for Indian hospitals under three heads. The institutions grouped under Heads (1) and (3) are, generally speaking, for the general public. Those under Head (2) are for special classes of persons, such as railway servants, policemen, &c. :—

	(1) Civil Hospitals and Dispensaries (State Public, Local Fund and Private aided.)			(2) State Special and Railway Hospitals.			(3) Private Non-aided Institutions.		
	No. of Institutions.	No. of In-patients.	No. of Out-patients.	No. of Institutions.	No. of In-patients.	No. of Out-patients.	No. of Institutions.	No. of In-patients.	No. of Out-patients.
1913 .	2,820	615,062	30,032,517	851	98,171	2,331,969	697	57,252	4,828,357
1914 .	2,856	536,055	31,387,243	851	107,708	2,565,281	712	73,459	5,036,815

**Lunatic Asylums.**—The treatment of lunatics at asylums prevails on only a small scale in India, where insanity is less prevalent than in European countries. The census of 1911 showed an increase of nearly 22 per cent. in the number of insane since 1901. The number admitted into asylums in 1914 was 2,083 as against 2,327 in 1913. The total asylum population of the year was 8,462.

## The Tropical Diseases.

This account of the chief tropical diseases was written by Major Gordon Tucker, I.M.S., of Grant Medical College.—

If the principal scourges of the European in the tropics, namely, malaria, dysentery, and typhoid, could be removed, there would still remain the strain of climate as a source of disease and a cause of deteriorated health, not amounting for a time to actual illness, but eventually showing its effects in lessened resistance to the wear and tear of life, premature senility of the tissues, and diminished fertility. This results mainly from the transfer to a hot climate of an individual whose heat-regulating mechanism has previously adapted itself to conditions where the body temperature has to be maintained some 40° above that of the surrounding air. On arrival in a country where the temperature of the air is perhaps the same as that of the living tissues, it is obvious that there must be a sudden and violent disturbance of such mechanism. This mechanism is very complex and exists for the purpose of striking a balance between the heat formed by the changes in the tissues, and the heat lost from the lungs and by radiation from the surface of the skin. But beyond this there is no doubt a regulation of the temperature dependent in some way on the normal working of the central nervous system, as is shown by the remarkable alteration which may take place in the temperature of parts of the body when the brain has been subjected to some gross lesion.

In the tropics the amount of carbonic acid given off by the lungs is reduced about twenty per cent, the number of respirations per minute is reduced, and there is lessened activity of the lungs. This shows that there is less tissue change (or combustion) going on in the tissues, that is to say, diminished heat-production. The same is shown in the diminished amount of work done by the kidneys. As regards heat-loss, this is almost entirely effected through the skin, 70 per cent of the heat of the body in temperate climates going off by radiation and conduction, and 15 per cent by evaporation. When however the temperature of the tropical atmosphere rises, the loss by radiation falls to nothing, and all the heat has to be dissipated by evaporation from the surface. Consequently, practically all the work of losing heat, which strikes the balance with the heat production and maintains the body at a normal temperature, falls upon the sweat glands which are therefore in a state of continued and abnormal activity. In hot dry atmospheres the water evaporates as soon as formed, but in conditions of heat with great humidity, such as obtain during the worst months of the year in Calcutta and Bombay, the skin is kept continually moist by trickling beads of perspiration. Herein lies the comfort and healthiness of the punkah which removes excessive moisture. But it is obvious that in order to keep the temperature of the body normal there must be increased flow of blood to the surface of the body, a state quite different from the conditions under which the organs of the European have been trained. This favours those sudden chills to which Europeans are so sub-

ject, and acts prejudicially to the working of the internal organs, especially those subserving digestion. A blast of cold air coming on the congested skin in the early hours of the morning must chill the surface, causing a sudden contraction of the cutaneous vessels, and tending to produce a rapid flux of blood to the deeper parts, inducing a congestion of the mucous membrane of the bowels, and from that results the "morning diarrhoea" which is occasionally severe and exhausting. Such a state of affairs may become chronic, and so lead up to one of the climatic diarrhoeas which are a frequent cause of invaliding. Moreover a sudden congestion of the liver and spleen in a person who has had malaria, may be followed by a malarial hepatitis or splenitis, and repeated attacks of these conditions may result in permanent enlargement of these organs; or at any rate, in the case of the stomach and liver, to derangement of function and so to chronic dyspepsia or insufficient manufacture of bile.

Again, the chronic hyperæmia of the skin favours the development of fungi and microbes. Hence the existence of ringworm of various kinds from which Europeans frequently suffer. There are microbes which, even in temperate climates, are found within the layers of the skin or on the surface. On account of the chronic congestion and moisture of the skin in tropical climates these microbes not only become abundant but virulent, and hence the Boils which are often a serious affliction in the hot months. We frequently come across most distressing cases where the patient is covered from head to foot with them. When the boil comes to a head and softens it is easy to afford relief by opening each, and so relieving tension, but the worst kind is the "blind boil" which forms as a hard red mass, intensely painful and not coming to a head, and here an incision gives little relief. Until lately these cases were very unsatisfactory to treat, and patients would recover after weeks of pain and much reduced in health. Fortunately we have in the vaccine treatment a most successful method, the vaccine used being either a stock one and generally acting like magic or, in a small percentage of cases requiring to be made from the boils themselves. In still other cases the infection of the skin causes the formation of CARBUNCLES, which are more serious but require treatment on the same lines.

Another more common condition resulting from the congestion of the skin is PRICKLY HEAT. This results from acute inflammation about the sweat glands and distention of their orifices, producing red papules and little vesicles, the site of intense itching. The trouble is believed to result from the proliferation of a particular microbe in the skin, which alters the reaction of the perspiration. Be this as it may, inoculation of the skin is likely to take place through scratching, and so to the formation of boils. In some cases the skin is so intensely inflamed that the region of the shoulders and neck feels like leather, or the surface gives the impression of sand-paper. It is a serious condition in young infants, as



the irritation prevents sleep, interferes with digestion and so promotes diarrhoea, so that this simple malady may be the starting point of a dangerous illness. Flannel next to the skin should be avoided in the hot weather as it is so liable to start the irritation. A good lotion consists of two teaspoonfuls of Eau-de-cologne in ten ounces of a 1 in 2000 solution of perchloride of mercury, dabbed on the skin and allowed to dry: followed by dusting with equal parts of boric acid powder and talc.

To avoid the heat the European flies to the punkah. The electric punkah has been one of the greatest blessings introduced during recent years into Indian towns as its use insures a good night's rest in place of the weary hours of sleeplessness which formerly wore out the temper and the mental energy of the European during the hottest months. Still this blessing is not without its attendant dangers. Most common are attacks of muscular rheumatism, sudden internal chills causing diarrhoea, attacks of colic, ordinary nasal catarrh, and sometimes bronchitis or pneumonia. The electric punkah does away with the mosquito curtain, which does not conduce to the free circulation of air, and gives good ventilation in its place.

Finally, we have the effects of a continued high temperature on the working of the nervous system. As has been remarked by the late Lt.-Col. Crombie, I.M.S., (in a valuable paper on "The measure of physical fitness for life in the Tropics," to which the writer is much indebted), "In the tropics there is going on continually and unconsciously a tax on the nervous system which is absent in temperate climates. The nervous system, especially those parts of it which regulate the temperature of the body, are always on the strain, and the result is that in time it suffers from more or less exhaustion." The mean temperature of a European in India is always about half a degree higher than it is in a temperate climate, and it may be raised to 99° or 100° after severe bodily exertion. When, under the strain of a severe hot moist and sultry season, the heat-centre gives out, or as it is said is "inhibited," we have all the serious phenomena of HEAT STROKE. But in the less marked but long

drawn out process of nervous exhaustion we have the common tropical effect of deficient mental energy, generally commencing with unnatural drowsiness or loss of appetite and a yearning for stimulants, which culminate in that lowering of nerve potential which we know so well as NEURASTHENIA. This nervous disturbance due to climate is likely to be most marked, as Crombie points out, in two classes of persons, namely those who suffer from obesity, and those who are members of families which may be designated as "neuropathic," that is whose nervous systems are naturally unstable. To these may be added persons with naturally defective digestion and those who have a predisposition to gout.

To sum up, it will be seen that the effect<sup>s</sup> of long residence in the tropics are real and permanent, not only in the direction of lowered bodily health, but in undue wear of the nervous system, which may not only be apparent during active service in duties involving strain, anxiety or responsibility, but also after retirement; so that the chances of longevity of the retired Indian official are not up to the normal, and the "extra" which the Insurance Office puts on such lives is not only to cover the risks incidental to life in the tropics, but also the diminished vitality of those who have survived to enjoy their pension and ease.

But there are other Indian risks, and these are most likely to affect travellers, due to the effects of heat on food. Microbes multiply with profusion in milk, and decomposition is liable to occur in meat within a very short time after killing. Milk should always be boiled; and owing to the dirt in railway dining-rooms, and in many hotels, and the carelessness of the lower type of native servant employed therein, it would be better to rely on tinned milk or on a supply of Horlick's milk tablets, when travelling long journeys by rail and in the smaller towns. Beef should never be eaten underdone, as it is a prolific source of tape-worm in India. There is also liability to contamination of food by flies and dust. Indian cooks, though among the best, have little regard for sanitation, and consequently the state of the cook-house should be carefully supervised.

## MALARIA.

Attacks of malaria, dysentery, and enteric represent the principal risks to the European travelling in India. Malaria is the commonest cause of fever in the tropics and subtropics, but the risks therefrom have been greatly diminished by our complete knowledge of its causation which now permits an intelligent prophylaxis, that is, taking adequate precautions against infection. The connection of certain kinds of fever with marshy soils has been recognised from ancient times, whence its old name of paludism; and the word "malaria" itself implies the belief in the existence of an emanation of poisonous air from the water-logged ground. It is now realised that the poison is conveyed solely by mosquitoes, and by the anopheline species. There are only a few of the many anophelines which carry malaria, but all are to be regarded as dangerous.

The parasite of malaria is a delicate jelly-

like body which invades the red cells of the blood, and lives at their expense. It has two life-cycles, one within the blood of the human host (endogenous and sexual), the other in the stomach and tissues of the mosquito (exogenous and sexual). But the first part of the sexual cycle is prepared for in the blood of the human host.

If the blood of a patient be taken about an hour before the occurrence of the "rigor," (the shivering-fit which marks the commencement of the attack), and examined in a thin film under a high power of the microscope, some of the red corpuscles will be found to contain bodies composed of delicate protoplasm showing minute granules of dark pigment in their substance. These bodies are the parasites. The granules represent the result of the destruction by the parasite of the red colouring-matter of the blood-cell. The

latter consequently appears paler than natural and is enlarged. In the parasite of the so-called benign tertian fever, if the blood be again examined when the rigor is commencing, the little mass of jelly is found to have divided into from twelve to twenty minute spheres all held together by the remains of the degenerated red cell, and with minute masses of pigment in the centre. Later the group of spherules has burst through the envelope that held them, and has appeared free in the blood-fluid. Many of these free spherules are attacked and absorbed by the phagocytes, but those which escape destruction effect their entrance into other red blood cells and go through the same process of sexual division, taking forty-eight hours for the process. On the time taken for this cycle to occur depends the periodicity of the fever, the attack appearing every third day, whence the name tertian fever. Another variety of malarial parasite, not very common in India, takes seventy-two hours to complete its cycle, hence called the "quartan" variety.

There is also a third kind of parasite called the "malignant tertian," called by the Italians the *acutivo-autumnal* parasite, which also takes forty-eight hours to go through its cycle, but which gives rise to a more irregular fever, and has more pernicious effects on the system and is also liable to produce severe nervous symptoms, such as unconsciousness, often ending in death with very high fever. Each kind of parasite has its special characteristics which can be observed by microscopical examination. Consequently expert examination of the blood is always advisable in cases of fever, not only to show that malaria is present, but also to distinguish the particular kind which is causing the trouble.

Within the blood there also appears the first stage of the sexual life of the parasite in the shape of male and female elements, which result from some of the parasites which do not undergo the usual segmentation described above, and which exist for the purpose of allowing further development in the non-human host, which in the case of this particular parasite is the mosquito. These sexual elements are especially in evidence in the blood of cases of the pernicious variety of malaria, in the form of crescentic bodies which obtain considerable protection from the phagocytes, and many therefore persist for some time in such blood. "Crescents" appear only in malignant fevers, and persons who harbour them are of course a danger to the community, inasmuch as the mosquitoes of the locality are infected from them, thus rendering such village or street unhealthy from malaria.

The sexual elements of the malarial parasites when taken into the stomach of the mosquito which sucks up the blood of its victim, undergo certain changes, the male element extruding flagellate or hair-like processes which fertilise the female. The latter thereupon changes into a body endowed with the property of locomotion, which makes its way into the coats of the stomach of the insect, and becomes divided up into a vast number of minute cysts, each of the latter becoming packed with minute rod-like bodies. The cysts rupture into the body-cavity of the mosquito, and the rods, thereby set free, be-

come collected within the substance of the salivary glands, and ultimately make their way to the base of the proboscis. On such an infected mosquito pushing its proboscis into the human skin when it wishes to draw blood some of the rods are injected into the blood stream. They then enter red blood corpuscles and go through the various cycles described above.

From three to five days, or as long as a fortnight, after being bitten by such a mosquito the patient has an attack of fever, sometimes preceded by pains in the limbs, headache, and malaise. This is soon succeeded by a feeling of intense chill, perhaps associated with vomiting. The skin becomes cold and blue, the shivering is excessive and prolonged, constituting the "rigor" stage. In this state the patient is in great distress, and obtains little sense of relief from the blankets which he heaps up over himself. Although the surface of the body is very cold, the temperature, taken in the arm-pit or mouth, shows a rise to 103° or higher. In a quarter of an hour or more the "hot stage" comes on, the face becoming flushed, the surface of the body red and warm, the small quick pulse becoming full and bounding, and perhaps the patient complains of throbbing headache. He remains thus for a few hours and then occurs the "sweating stage," perspiration breaking out about the head and face, and soon extending to the whole body. Great relief is experienced when this is entered on, and is likely to be followed by a refreshing sleep. During the paroxysm the spleen is often enlarged and may be the seat of considerable pain. There is also often troublesome cough from a concomitant bronchitis. With repeated attacks the enlargement of the spleen is liable to become permanent, the organ coming to form a large heavy tumour with special characteristics, the so-called "ague cake," which is common among the children of malarious districts. Europeans who suffer from severe or repeated malaria are likely to suffer from permanent ill-health in the shape of anæmia, dyspepsia, or easily-induced mental fatigue.

### Treatment.

The traveller in India should endeavour to guard himself against the bites of mosquitoes. This can be done to a great extent by the use of mosquito curtains, the mosquito seeking the blood of its victim mainly at night. But when travelling by train protection is difficult. There are some odours which mosquitoes appear to dislike. Sprinkling the pillows with lavender water is sometimes efficacious, or smearing the hands with lemon-grass oil. Camps should not be pitched in the neighbourhood of native villages, if it can be avoided. Travellers should provide themselves with thermometer and a supply of quinine tablets.

During the cold stage the patient should be well covered, and hot fluids administered, unless vomiting is present. Quinine should not be taken in this stage as it increases the distress. A diaphoretic, or sweating mixture, should be administered every two or three hours until the skin becomes moist, and throughout the hot stage; this soon gives relief, and when the stage of perspiration has been reached, the

grains of quinine should be given, and repeated in five grain doses every six hours until the temperature becomes normal. Thereafter the drug should be continued for a few days in doses of five grains twice a day. This is calculated to ward off a second attack, or, at any rate, to reduce its severity and prevent a third. If there is vomiting, quinine tablets are not likely to be digested and absorbed, in such cases the drug should be given in a mixture dissolved in a dilute acid. The advantage of quinine tablets is that the unpleasant taste is avoided.

There are some severe continuous malarial fevers which appear to resist the action of quinine. These are the pernicious tertian fevers, which so often cause difficulty in diagnosis inasmuch as for a few days they may suggest enteric fever, especially to those inexperienced in tropical diseases. In such cases large doses of quinine are required, the

skin being kept moist meanwhile by a dia-phoretic mixture. Some of these fevers last for a week or longer, but the majority of them yield to quinine in three or four days. It is in such that an early examination of the blood is so useful. In certain cases of profound malarial poisoning or where, for any reason, quinine does not appear to be acting when administered by the mouth, recourse must be had to the injection of quinine into the tissues. This should always be done by a skilful physician, and with special precautions, as some cases of tetanus have occurred after quinine injections taken from stock solutions, even when apparently given with every care. The "vaporoles" prepared by Messrs. Burroughs Wellcome & Co, which consist of little glass capsules containing preparations of the drug dissolved in sterile and non-irritating fluid, appear to be absolutely devoid of risk and are very efficacious.

### TYPHOID FEVER.

By Typhoid or Enteric Fever is meant a continued fever, lasting for three weeks or longer, due to the entrance into the intestinal canal of a particular bacillus (the typhoid bacillus), which not only produces serious abdominal trouble but also symptoms referable to a generalised infection of the blood by the bacillus and the poisons which it engenders. Formerly the scourge of the British Army in India, especially among the younger soldiers, it has been reduced to a very low point, through the prophylactic use of Sir Almroth Wright's vaccine. Continuous attention to the sanitary condition of the soldiers' quarters, improvement of water supplies, and skilful medical treatment.

"Paratyphoid" is a term applied to certain fevers which have all the characters of typhoid, but with a rather lower mortality, and which are due to infection by bacilli which are closely related to the typhoid bacillus.

The fact that typhoid more frequently attacks the new arrivals to the tropics renders this disease one of the risks which tourists have to face, but this can be minimised by knowledge of the manner in which the typhoid bacillus affects an entrance into the system.

Typhoid Fever has now been shown to be a common affection among Indians, contrary to what was held some fifteen years ago. In Bengal and the Punjab, according to Leonard Rogers (Fever in the Tropics), the maximum of cases for all classes occurs during the hot months, while the maximum for Bombay is in the rainy season. But taking the European cases only he finds that the largest number of cases falls within the dry, cold and hot seasons, and considers that this is due to the European being most frequently infected through contaminated dust, this class of person paying greater attention now-a-days to the condition of the water which he drinks, unlike the Indian who will drink water out of the nearest tap.

As is well known, infection of typhoid is most commonly produced by contamination of drinking water. Great care is therefore necessary in boiling and filtering drinking water and in protecting the vessels in which

it is kept from contamination by dust. In the neighbourhood of all native villages the soil is laden with animal dejecta which, of course, is very likely to be associated with disease-producing microbes. Hence infection of the food in cook-houses and shops is easily produced by the wind carrying the dust from latrines and other foul areas. Uncooked vegetables produced from gardens watered by sewage containing fluid are also very dangerous, and should be avoided by the Indian traveller. Lastly oysters taken from estuaries which receive rivers laden with organic matter from the villages on the banks are believed to afford special protection to the typhoid bacillus, and when eaten raw are dangerous.

In many cases the onset of the disease is sudden, with headache, shivering and vomiting, but in a little less than half the onset is insidious, the patient being out of sorts, slightly feverish, perhaps with occasional looseness of the bowels, loss of appetite and a little sickness. He ultimately takes to his bed, generally dating the commencement of his illness from this event, and there forthwith begins a period of at least three weeks of anxiety for his friends and relatives, inasmuch as enteric fever, as seen among Europeans in India, is characterised by its greater severity and longer duration. The temperature rises gradually day by day during the first week, remains at a fairly constant high level during the second, becomes irregular with daily remissions during the third, and in the majority of cases is succeeded by a period of convalescence, during the first part of which the greatest care in dealing with the patient is required. The bacillus produces its most important effects on the lower portion of the small intestine, certain glandular structures in the wall of the bowel becoming inflamed, enlarged, and finally ulcerated. It is on the formation of these intestinal ulcers that many of the worst complications depend. The ulcerative process favours, first a looseness of the bowels, later an exhausting diarrhoea. Moreover the destruction of some of the coats of the bowel may open up an adjacent blood vessel and produce alarming or even fatal hæmorrhage. And again the whole thickness of the bowel may be perforated, causing death

from collapse and peritonitis. This is the danger which the physician has in view throughout the case. It can only be guarded against by the most careful nursing and attention to the dietary. Other dangers are bronchitis and failure of the heart, especially during the third week. During the stage of convalescence the same care has to be taken with the dietary as the ulcers are undergoing healing, and an error might lead to the rupture of one of them when all danger may well be expected to have passed. Finally, owing to the depressing effects of climate, convalescence is often attended with prolonged mental depression.

In the matter of treatment it is absolutely essential that the patient should have the benefit of skilled nursing. Fortunately highly-trained European nurses can now be obtained from any populous centre, though occasions arise when the demand exceeds the supply. If possible two nurses should be obtained for day and night duty respectively. Unless it is absolutely necessary to remove him, the patient should be nursed where he falls ill and not sent long distances by train. At the most he should travel to the nearest large town where there is a Civil Surgeon. Treatment mainly consists in keeping the fever within bounds, and thereby sparing the strain on the heart which is great during the three weeks of continued fever. This is effected in great part by the system of hydrotherapy, that is, treating the patient by continued tepid baths or by frequent sponging with tepid water to which a little toilet vinegar should be added. There is no special drug which is of any use

in aborting the fever, but this does not mean that drugs are of no use in typhoid. On the contrary the complications, which are many, will be detected as they arise by the careful physician, and there is no disease which tries more than this the skill of the doctor and the care of the nurse, who will frequently bring to convalescence what seems to be an almost hopeless case. Abdominal distension, for instance, is a frequent and serious complication in Indian typhoid, and should be treated as soon as detected. It results partly from the decomposition of the intestinal contents, partly from loss of the muscular tone of the bowel. It hinders the respiration and the action of the heart, and favours the occurrence of perforation. Diet consists almost entirely of milk, either pure, diluted with barley water or whey, or as a jelly.

Lastly a word should be said about the importance of typhoid inoculation to those intending to travel in India or the tropics. It is better to have Wright's prophylactic vaccine injected before leaving home, but if this is not done, it should be submitted to on arrival in Bombay. In the majority of cases the only discomfort resulting is a little passing tenderness at the site of inoculation: in some cases there are a few hours of fever: and in the worst the patient feels out-of-sorts for twenty-four hours. The inoculation (with a larger dose) should be repeated on the eighth day. Attention to this small precaution as a routine measure would obviate most of the catastrophes which we witness on occasions among "globe-trotters" who have come to the country for pleasure or health.

## DYSENTERY.

The term Dysentery is applied to several forms of infective inflammation of the large bowel, in which the principal symptoms are gripping, abdominal pain, frequent straining, and the passage of a large number of evacuations characterised by the presence of blood and mucus. The changes which take place occur in the mucous membrane of the large bowel, and are first an acute catarrh succeeded by ulceration more or less extensive, and sometimes going on to gangrene.

The disease is endemic in India, and is in fact common in Eastern countries, and in Egypt. It is liable to arise in epidemic form especially among armies in the field. It is caused by a contaminated water supply, and by the infection of food by dust and flies. Dysentery is probably caused by several varieties of micro-organisms but for all practical purposes may be said to be divided into two great groups, one due to the amœba of dysentery, and the other caused by a bacillus described by Shiga and known as bacillary dysentery. The latter form is more common in Japan and in the north-eastern side of the Indian peninsula; the amœbic form being that most commonly seen in the Bombay Presidency. The bacillary form is characterised by the presence of a very large number of evacuations perhaps as many as a hundred or even more in the twenty-four hours. In the amœbic form there are seldom more than twenty evacuations in the day, and there is less fever and general depression than in the

bacillary variety. In the amœbic form there is greater tendency to thickening of the bowel wall, and to the dangerous complication or sequel of abscess of the liver.

After a few days of severe illness should the patient recover there is a danger that the disease may become chronic, a condition which is associated with emaciation and profound weakness. The chronic form is also more likely to eventuate from the amœbic type.

The frequency with which it attacks Europeans in India may be judged from the admissions of the European soldiers into hospital, the figures of admissions for each of the years 1910 and 1911 being 7·7 per thousand of strength.

The treatment of the bacillary form with an anti-dysenteric serum has had good results. In the amœbic form most Indian physicians still rely, and rightly so, on the use of ipecacuanha. This has to be given with particular precautions and with a previous dose of opium to diminish the liability to vomiting. Recently, thanks to the work of Leonard Rogers, a valuable drug has been placed in our hands, in the form of emetine, an alkaloid derived from the ipecacuanha root; and which when injected into the deeper layers of the skin, gives all the good results of ipecacuanha without its unpleasant effects. It is of special value in the case of children in whom acute dysentery is a very serious disease. We have hereby obtained one more efficient weapon in the contest with one of the common diseases of India.

### ABSCESS OF THE LIVER.

There are several varieties and causes of abscess of the liver but the term is applied in India to the single abscess which frequently forms as the result of amebic dysentery, the latter generally preceding but sometimes being concomitant with the formation of the abscess. It is one of the scourges of the European in India, and is especially to be dreaded on account of the high mortality. Taking all the cases together, including the acute and chronic and all classes of the community, the death rate is about sixty per cent., but this will probably be reduced by recent improvements in the methods of diagnosis and treatment. The latest annual report of the Sanitary Commissioner with the Government of India states that next to enteric fever, hepatic abscess is the most frequent cause of death among European troops, but the admissions and deaths on account of it have decreased greatly during recent years. The report also notes that the decrease in the number of cases of liver abscess is coincident with an equally steady fall in the number of admissions to hospital for alcoholism.

The disease is most liable to attack those who, in addition to having had an attack of dysentery, have indulged, not necessarily to excess, in alcohol and general good living, and are at the same time somewhat sluggish in their habits. It is often preceded by continued fever, malaise, dyspepsia, and more or less uneasiness in the liver region, or the latter organ may be acutely enlarged and very tender. In many cases the exact diagnosis is often a

matter of anxiety, but greater precision is now possible as we have come to recognise what Rogers has called the presupplicative stage of amebic hepatitis, which is very amenable to treatment by ipecacuanha or injections of emetine. The use of this method will often prevent the case going on to the dangerous condition of abscess, which when it has once definitely formed can only be dealt with by prompt operation, which in itself has a high mortality. Further aid is now obtained by special examination of the blood and by the use of the X-rays, which will often clear up a doubtful case.

The abscess generally forms in the right lobe of the liver. Should it form on the left side it is especially liable to rupture into one of the internal organs.

The same complication may eventuate when the abscess forms on the right side. Here the principal point of rupture is into the right lung, the contents of the abscess being suddenly evacuated, in some cases without much warning, and nature thereby effecting a cure. Such a termination however is not desirable as healing will take place quicker by surgical means.

There are some abscesses which are exceedingly insidious, it often happening that patients are sent home with a fever associated with general loss of health and weight, where the existence of a deep seated abscess may not even be suspected, but in which the symptoms of hepatic abscess suddenly occur and clear up the case: or the correct diagnosis may obtrude itself by the sudden rupture as above described.

### PLAGUE.

Plague is a disease of very great antiquity; its ravages and symptoms have been described with remarkable accuracy by the old historians, such as Procopius. Not many years ago it appeared to be a disease of historical interest only, but the present pandemic, which commenced about 1894, has made it a subject of the greatest importance to the inhabitants of the British Empire. It was in March 1894 that it first became prominent in Canton, and thereafter it spread to Hongkong, Macao and Pakhoi, and so along the whole of the Southern China Coast. It probably arrived in Bombay in March 1896, but it was not until the end of September that it became noticeable in that part of the native city known as Mandvi, in which the great grain supplies are collected, and wherein consequently there is an enormous rat population. In October of the same year the presence of the pestilence was officially acknowledged. Everything which the limited knowledge of the subject at that time suggested, was done to check its spread; but, in spite of all efforts, the pestilence spread from the infected city throughout the greater portion of the Peninsula, and while its ravages of late years have not been so terrible as at its first appearance, yet the disease still takes its annual toll of human life, and it has apparently become one of the endemic diseases of India. According to the official figures, Plague since its appearance has been responsible for more than seven and a half million deaths within the limits of the Indian Empire. These figures should perhaps be increased by

about fifteen to twenty per cent., due to defect in the registration of the causes of deaths and also to the fact that the disease often simulates other maladies for which it is likely to be mistaken by an uneducated population.

Plague is an acute infection of the blood by a bacillus which was discovered by Kitasato in Hongkong in 1894. It generally affects its entry by the skin, on which it is deposited by the rat-flea. At the site of deposit a small pustule is occasionally found which soon forms a superficial ulcer. In such cases inflammation and distention of the lymphatics may be noticed running from the neighbourhood of the small and painful ulcer to the nearest group of glands. These will be found to be enlarged and exquisitely tender, the tenderness being out of all proportion to the size of the glandular enlargement and to the amount of local inflammation. This glandular enlargement is called the Bubo, which has given the name to the most common form of the pest—Bubonic Plague.

With the appearance of the Bubo, or even a day or so before it, there is evidence of a general infection of the system. In the shape of extreme prostration, mental confusion, a furred tongue, and fever which is generally high. The pulse is accelerated, and while at the outset, especially in full-blooded muscular adults, it is likely to be full and bounding, there is sooner or later, generally soon, evidence of early failure of the strength of the cardio-vascular system. The pulse becomes quicker, smaller, and the heart

sounds feeble. As the case progresses, the primary ulcer will enlarge and become of an angry appearance, the Bubo will also enlarge and the tissues around the inflamed lymphatics will be swollen and oedematous. To this variety the term "cellulo-cutaneous plague" has been applied. The spreading ulcer, which is really a local gangrene, has been described as the plague "carbuncle"; these forming on the skin of those affected were often referred to by old historians as a prominent feature in many ancient epidemics.

These cases however are somewhat uncommon. The usual variety met with is the Acute Bubonic Plague. In this the patient is attacked with fever, and all the general symptoms of an acute infection, and on the first, second or sometimes the third day of the illness the characteristic bubo appears. The common site is among the glands of the groin, for the reason that these glands receive the lymphatics from the lower limbs and from the lower portion of the trunk up to the level of the navel, a larger area than that drained by any other group of glands. Other sites for Bubo formation are the arm-pits, the glands of the neck, those about the angle of the jaw and below the chin, and very rarely the little gland on the inner side and just above the elbow, and the small glands behind the knee joint. In some cases, generally in association with Buboes in the groin, the deep glands of the abdomen can be felt to be enlarged.

These Plague Buboes are of different kinds and it is a matter of some importance in connection with treatment and the outlook as regards recovery, to recognise the type of Bubo present in each particular case. The common variety is the "softening bubo." The enlargement increases somewhat rapidly and the hard swelling gives place to a soft doughy mass around which is a limited amount of serous effusion into the subcutaneous tissues. If the patient lives till the fifth day or thereabouts this bubo will feel like a tightly stuffed pin-cushion, or may give the experienced examiner the signs that the contents are of a fluid nature. On incision, pus and shreds of the disorganised gland will be evacuated, and under suitable treatment the cavity, though large, will heal up within a week or so. When these softening Buboes are allowed to rupture spontaneously a large foul cavity is produced; such are not unfrequently encountered among the poor, who have not received adequate attention during the stress of a plague epidemic.

Another variety of bubo obtains when the glands inflame and harden, the inflammation being so acute that the blood supply of the part is obstructed and the whole of the affected area sloughs out, leaving a large superficial ulcer of a very unpleasant appearance. These buboes are found where the inflamed glands are bound down beneath tense tissues, as in front of the ears and in the region of the groin. To this kind the term "indurated bubo" has been applied. Another variety the "oedematous bubo" occurs in the neck and the arm-pit and in them the serous effusion into the tissues around the glands, present to a less extent in the common type is the essential feature. The whole arm-pit or the side of the neck may be distended by the accumulation of fluid under

the skin. It is an extremely distressing kind of bubo, as the pain is great and nearly all the patients die. Also there is a rare kind the "hard late bubo," which appears after about a fortnight in cases simulating typhoid fever, and lastly there are some soft buboes which abort and shrink with the rapid subsidence of the fever—the "shrinking bubo." The fever continues from the outset with slight emissions; it is generally about  $103^{\circ}$  to  $104^{\circ}$ , but it may rise to a great height from almost the initial rigor. On the third day the temperature tends to approach the normal, and almost immediately rises again. Should it rise to a point above that of the maximum temperature preceding the remission the outlook is bad; but in cases which are likely to do well it rises to a point which is less than that of the preceding maximum, and after about three days gradually falls to normal, with slight daily oscillations depending on the amount of the suppuration in the buboes and their local condition.

It is to be understood that this disease is of such great virulence to human beings, on account of the early appearance of the plague bacillus in the blood-stream, that there are many instances in which death occurs before the bubo has had time to undergo the changes described above or even to form. The more acute cases are also liable to be a typical in their mode of onset. Some are taken with a wild delirium in which they are likely to attack those about them; others suffer from vomiting of blood followed by rapid failure of the heart and death; pregnant women miscarry and practically all of them die; and lastly there are cases where the general and local symptoms are slight and yet failure of the heart may suddenly ensue within a few hours of the onset. These so-called "fulminant" cases are generally met with at the commencement of every epidemic: in some of the descriptions of mediæval epidemics they seem to have been in the majority, and it is on account of these that plague epidemics appear so terrible to the occupants of the plague-stricken town. Fortunately, however, there is a large majority of cases which allow some scope for medical skill. The condition of the patient after the full development of the symptoms is always one which gives rise to great anxiety. The mental condition becomes dulled, which, while it mitigates considerably the distress of the sufferer, is nevertheless an indication of the action of the plague poison on the nerve centres. The eyes are suffused and often acutely congested. There may be cough, which is a bad sign as it indicates either a secondary pneumonia or the onset of an acute bronchitis, the direct result of the failure of the heart. If the latter progresses the breathing becomes more rapid, the pulse weak and almost uncountable at the wrist, the skin cold and clammy, and towards the end covered by profuse perspiration: finally, the breathing becomes irregular, and after several long-drawn gasps the patient breathes his last.

In other cases however improvement starts about the fourth day, the temperature gradually falls, and the mind clears: the bubo suppurates in due course and heals up, and the patient passes into a slow convalescence, but which is sometimes retarded by the formation of chronic

abscesses, boils, attacks of heart failure or of palpitation; or ulcers of the eyeball with infection of the whole globe and consequent loss of sight. Some recover with permanent mental enfeeblement, or persistent tremors of the limbs with difficulty in speaking with clearness.

#### Septicæmic Plague.

This term is applied to certain forms of acute plague where buboes do not form, or where there is uniform but slight enlargement of glands in various parts of the body with symptoms of a general blood infection. The term is misleading, inasmuch as most cases of acute bubonic plague are really septicæmic from the outset. These cases are either acute, ending fatally about the third day or sooner; or are sub-acute, with symptoms simulating typhoid fever, ending fatally in about a fortnight. In the acute cases large dusky patches of blood-effusions beneath the skin, the so-called plague spots, are sometimes found; and there may be hæmorrhages from the stomach or bowels.

#### Pneumonic Plague.

In this variety the plague bacillus proliferates in the lung and causes rapid consolidation of large patches of the lung tissue scattered irregularly throughout the organs; with a considerable amount of œdema, so that the lungs are engorged with blood, are large and heavy, and the bronchial tubes filled with reddish frothy

fluid which contains the plague bacillus in almost pure culture. The fever is very high and the interference with respiration immediate, and death occurs from the second to the fourth day. A curious fact about pneumonic plague is that one such case is liable to give rise to others of the same type.

#### Treatment of the Disease.

No serum or antitoxin has so far proved of value in diminishing the mortality of the sick. Much can, however, be done by medical treatment. Absolute rest is required and the patient should not even be allowed to sit up in bed. Drugs which act as heart stimulants are required almost from the outset, and frequently these have to be administered by the skin as well as the mouth. The buboes should be fomented till they soften, and incised as soon as fluid is formed. For the pneumonic condition the administration of oxygen gas gives relief. This can be obtained in India without much difficulty. Careful nursing is essential, and fluid nourishment must be given regularly in an easily assimilable form, and complications have to be met as they arise. As regards prophylaxis by means of Haffkine's Plague prophylactic which is manufactured in enormous quantities at the Bacteriological Government Laboratory at Parel, it may be said that its use gives a threefold chance of escape from attack and a reduction of case mortality by fifty per cent.

### DENGUE FEVER.

Dengue fever, otherwise known as Dandy fever or Breakbone fever, is rather common in India and is generally present in the larger towns, but as it appears in manifold forms and various writers describe it differently, its identity is not always recognised; and, therefore, by many medical men is thought to be less common than it really is. On occasions it gives rise to very wide-spread epidemics. In 1902 there was an extensive epidemic on the eastern side of the Indian Peninsula, and quite recently there has been a bad outbreak in Calcutta. It is more common during the rainy season.

The onset is abrupt, with fever, slight sore throat producing cough, rapidity of the pulse, sometimes a red rash which is so fugitive that it is often overlooked, and intense pain. These pains constitute the patient's chief complaint. They are generally pains in the bones, or in the small of the back, or in some of the joints either large or small. Sometimes there is no complaint of pain in the limbs, but there is intense pain behind the eyes. The fever lasts for three or four days, during which in rare cases there may be further symptoms due to the appearance of a pleurisy or even a pericarditis. Sometimes there is intense shooting pain into the little finger. Though the intensity of the symptoms may give a very serious aspect to the case, yet a fatal issue is almost unknown. After the four days of intense suffering the fever sub-

sides somewhat abruptly, and at about this time a second rash appears, most marked over the shoulders and neck, and on the backs of the arms, or else an universal rash. It is of a dark red colour, often very like the rash of scarlet fever, or it may be like that of measles. With its appearance the more severe symptoms subside. During convalescence the patient is much depressed, and the pulse remains unduly rapid. Sometimes also pain starts again in one of the joints, or he is crippled by stiffness of the back or of several of the joints. After a shorter or longer period, from two days to ten, a second attack of fever and pain comes on which runs the same course but as a rule less severe and prolonged; in very rare cases there is a third attack.

There is no drug which will cut short the disease. From its likeness to rheumatism the salicylates are generally used, and perhaps relieve the pains. This drug should be combined with an ordinary fever mixture: large doses of bromide should be given for the headache, and the excruciating pains must be treated with morphia.

It is often impossible to distinguish the malady from influenza until the appearance of the rash.

It is believed that the poison is conveyed by the bites of a mosquito, and that this poison has characters which are analogous to the virus of Yellow Fever.

### CHOLERA.

This is one of the most important diseases of India, having been endemic therein for many hundreds of years. It is always present in the country, and sometimes extends over large districts generally from some crowded centre such as the site of a pilgrimage, from which it is dis-

persed over the country-side by the returning bands of pilgrims. The deaths in British India from this disease in 1911 numbered three hundred and fifty-four thousand and in the following year four hundred and seven thousand. The disease is of special importance to the numerous

pilgrims both on going to and returning from Mecca.

It is essentially a water-borne disease and the exciting cause is the "comma bacillus" discovered by Koch, so called from its shape when isolated and stained. The dejecta of a person suffering from the disease, when contaminating the soil, are liable to get washed by the rains into some water-supply, which may become the source of almost unlimited infection. Such contaminated drinking water is rendered innocuous by boiling, or filtration through a Pasteur-Chamberland filter. The importance of Koch's discovery, therefore, lay in the recognition of the fact that the poison was essentially water-borne. It can also be conveyed by flies settling on food.

The disease has an incubation period of from two to seven days. After a premonitory diarrhoea with colicky pains lasting for half a day or longer, the nature of the illness is announced by violent purging and vomiting, the former having the peculiar character of rice-water. The poison may be so intense that death takes place before the purging appears, the so-called "cholera sicca." In the common form collapse is early and marked, the extremities are blue and cold, the skin shrunken, the heart weak, the surface temperature below normal, though the temperature taken in the mouth shows high fever to be present. There is a curious pinched expression of the face with deeply sunken eyes, and the patient endeavours to communicate his wishes or fears in a hoarse whisper. He is further distressed by painful cramps in the muscles of the calf and abdomen, and there is suppression of the functions of the kidneys. Death generally takes place in this the algid state. Should the patient survive he passes into the stage of reaction, the unfavourable symptoms disappearing and gradually passing into convalescence. In some of these cases which give hopes of recovery there is a relapse, the conditions of the algid state re-appearing and death taking place. It has recently been recognised as a cause of the dissemination of the disease, that patients who have recovered will continue to discharge the bacillus for many weeks.

The prevention of cholera lies in attention to water supplies, and in boiling and filtering as a matter of routine in Indian life. All the discharges from the sick should be treated with disinfectants, and soiled clothing and linen destroyed. People who have to tour in cholera-stricken districts, or who go on shooting excursions, or who find themselves in the midst of a cholera outbreak should undergo inoculation with Haffkine's preventive vaccine. Two inoculations are required, the second being more intense in its effects. The temporary symptoms which may arise after the inoculation are sometimes severe, being always more marked than after inoculation against typhoid, but the protection afforded more than makes up for the temporary inconvenience endured.

During the cholera season the mildest cases of diarrhoea should be brought for treatment to a physician, as such persons are more liable than others to contract the disease.

Treatment mainly resolves itself into meeting the extreme collapse with stimulants and warmth. There is great temptation to administer opium but in some cases this is not attended with danger, and in others there is no capacity left in the patient for the absorption of drugs administered by the mouth. The mortality has, however, been reduced by the injection of saline fluid into the skin or directly into the veins, and also by the introduction of saline fluid of particular strength into the abdominal cavity.

### Kala-Azar.

This is a slowly progressive disease associated with great enlargement of the spleen and some enlargement of the liver, extreme emaciation, and a fever of a peculiar type characterised by remissions for short periods, and due to infection by a parasite of remarkable characters which have only recently been worked out. It is attended with a very high mortality, about 96 per cent., and has up to the present resisted all methods of treatment, although some patients appear to improve for a time, only in the majority of cases to relapse later.

It is endemic in Assam, from which it has invaded Bengal, and is now often seen in Calcutta. It is also fairly often met with in Madras, though it is said that the cases are imported ones. It is very rarely seen in Bombay, and then only in immigrants from infected localities, though there appears to be a mild endemic centre in Jabalpur in the Central Provinces; so it is likely to be more frequently met with on the western side of India. It has caused great mortality among the coolies on the tea-plantations of Assam, especially among the children; but under the recent measures of prophylaxis which have been put into force since knowledge has been acquired about its real nature and method of spread, the ravages of the disease are likely to be limited. It is very rare among Europeans and then almost entirely among those who have been long in India or who have been born and bred in the country.

Infection seems generally to start in the cold weather. There is fever with rigors, and progressive wasting and loss of energy. The temperature chart is a curious one, the fever showing two remissions during the twenty-four hours. Diarrhoea is common, especially during the later stages of the disease. The spleen enlarges early and is generally of enormous size producing bulging of the abdomen. A remarkable feature is the tendency to the formation of ulcers, which in many cases, especially in children, takes the form of a gangrenous ulceration of the mouth and cheek. Death usually occurs from some intercurrent inflammatory condition, often pneumonia.

The parasite is found in the spleen and liver during life, and can be obtained by puncture of these organs. As thus obtained it is a minute round body of special characters. In this state it is known as the Leishman-Donovan body from its discoverers. This small body has been cultivated by Leonard Rogers in suitable media and under low temperatures, and found to develop into a flagellated, that is tail-posessing, organism. How this peculiar



organism develops outside the human host is not yet completely known. It is certainly a house-infection, which accounts for the manner in which whole families have been swept off, one member after another. Its progress has been stayed by moving families from their infected houses and burning down their former quarters. This, and other facts connected with its spread, have suggested that the agent for conveying the poison from man to man is the common bed-bug, and

Patton has succeeded in developing the flagellate stage in this creature when fed on the blood of the sick.

There is a severe form of ulceration of the skin known as "Delhi Boil" from which organisms very similar to the Leishman-Donovan body were obtained many years ago. These bodies have also been cultivated outside the human host and found to develop into a flagellated organism. The two parasites, though closely allied, are nevertheless distinct.

## DRUG CULTURE.

Two monographs on the cultivation of drugs in India, by Mr. David Hooper, of the Indian Museum, Calcutta, and by Mr. Puran Singh, of the Indian Forest Department, Dehra Dun, have lately been published. Mr. Hooper, in his paper, states that one-half of the drugs in the British Pharmacopoeia are indigenous to the East Indies, and nearly the whole of the rest could be cultivated or exploited. The following are given as those that could be grown in quantity and as worthy of the attention of cultivators and capitalists:—

*Belladonna*, most of which is still imported, grows well in the Western Himalayas from Simla to Kashmir, the Indian-grown plant containing 0.4 to 0.45 per cent. of alkaloid.

*Digitalis* is quite acclimatised on the Nilgiris, growing there without any attention. The Madras Store Department obtains all its requirements from Ootacamund, and the leaf has been found equally active to that grown in England.

*Hembane* is a native of the temperate Himalayas from 8,000 to 11,000 ft. It was introduced into the Botanic Gardens, Saharanpur, in 1840, and it has been steadily cultivated there up to the present time, and the products supplied to medical depots satisfy the annual demand.

*Ipecacuanha* has been raised with a small measure of success in the hilly parts of India, and it only requires care and attention to raise it in sufficient amount to make it commercially remunerative.

*Jalap-root* grows as easily as potatoes in the Nilgiris, and there is no reason why the annual requirements (about 4,000 lbs.) for the Medical Stores of Bengal, Bombay and Madras should not be obtained from Ootacamund.

Mr. Puran Singh discussed the subject in a number of the "Indian Forester in 1914": he states that most of the drugs in the British Pharmacopoeia grow wild in India, and that there is already a large export trade for some of them. He adds, however, that materials collected at

random cannot be expected to fetch full prices, as they seldom come up to standard quality, and he adds: "The few drugs that are not indigenous to India could easily be made to grow in some part or other of this vast land. The great advantage accruing from the systematic cultivation of drugs is that a regular supply of genuine drugs of standard quality is assured. The variation in the quality of wild-grown drugs is sometimes a very serious drawback to finding a profitable market for them. The quality of *Podophyllum Emodi* growing wild in India is an illustration in point. This plant was discovered by Sir George Watt in the year 1888, and now, even after twenty-four years, in which it has been shown to be identical with the American drug that is being employed for pharmaceutical purposes, it still remains unrecognised by the British Pharmacopoeia, which, as explained by the "Chemist and Druggist" some time ago, is solely due to the uncertainty which still exists as to its physiological activity".

Mr. Singh also points out that the Indian consumers of medicine depend mostly on herbs growing wild in the Forests, the more important of these probably numbering at least 1,000. This inland trade is very large; the possibilities in the Punjab alone being put at Rs. 50,00,000. He mentions saffron, liquorice, and saleg as products exotic to India, whose cultivation in this country looks full of promise. Mr. Singh suggests that a complete survey be made of the extent of the inland trade in medicinal products found growing wild in Indian forests in order to arrive at the figures of annual consumption, and that the forest areas where the most important drugs grow should be preserved. Inquiries should be instituted as to the best methods of cultivation, and if need be, the means of extending the artificial propagation. It is to provide data to induce the private capitalist to embark on such enterprises that Mr. Singh advocates the formation of some body to go into the matter. He suggests that India is well worthy of attention by those in this country who are interested in extending the culture

of drugs in the British Empire. The Forest Department has already begun the cultivation of Indian podophyllum-root in the Punjab, United Provinces and the North-Western Frontier, and several maunds of dried rhizome are sold annually for local consumption. Mr. Hooper also shows that a start has been made in regard to the cultivation of belladonna, henbane and digitalis. One of the principal difficulties to be overcome is to ensure a ready market, and there is also always the danger of over-production to be considered.

### Essential Oils.

**SANDALWOOD OIL** is, by far the most important perfumery product of India. The sandalwood tree is a root parasite, obtaining its nourishment from the roots of other trees by means of suckers. It grows best in loose volcanic soil mixed with rocks, and preferably ferruginous in character. Although in rich soil it grows more luxuriantly, less scented wood is formed, and at an altitude of 700 feet it is said to be totally devoid of scent. The best yield of oil is obtained from trees growing at an altitude of 1,500 to 4,000 feet, but the tree requires plenty of room so as to enable it to select vigorous hosts to feed it.

**PALMAROSA OIL**, also known as Indian geranium or "Turkish geranium oil" is another of the principal perfume products of India. It is derived from the grass, *Cymbopogon Martini*, which is widely distributed in India, where it is known as "Motya". Gingergrass is an oil of inferior quality, possibly derived from older grasses or from a different variety of the same species. Both oils contain geraniol, the proportion in palmarosa being from 75 to 95 per cent, and in gingergrass generally less than 70 per cent. These oils are used in soap, perfumery, and for scenting hair oils and pomades.

**LEMONGRASS OIL** is derived from *Cymbopogon citratus* and *Cymbopogon flexuosus*. The former is a native of Bengal, and is largely cultivated all over India, but the oil distilled on the Malabar Coast and Cochín is derived principally from *C. flexuosus*.

**VETIVER, OR CUS-CUS**, is a perennial grass, *Vetivera zizanioides*, found along the Coromandel Coast and in Mysore, Bengal and Burma, in most heavy soil along the banks of rivers. The leaves are practically odourless and only used for thatching and weaving purposes. The roots are used in perfumery and in the manufacture of mats and baskets.

**THE MALABAR CARDAMOM, *Elettaria cardamomum***, is the source of the seeds official in the British and other Pharmacopœias. Cardamom oil of commerce is, however, not distilled from this variety on account of the high price, but is obtained almost exclusively from the long cardamom found growing wild and cultivated in Ceylon. The oil is used medicinally as a carminative and is also employed by perfumers in France and America.

**OSURUS ROOT** (the root of *Saussurea lappa*) is a native of Kashmir, where about 2,000,000 lbs. are collected annually. It is exported in large quantities to China where it is used for income. It is also used to protect shawls and

clothes from the attacks of insects. Its odour resembles that of orris root.

**BLUMEA BALSAMIFERA** is the source of the Nagal camphor used in China for ritualistic and medicinal purposes. This shrubby composite is found in the Himalayas and is indigenous to India. It is widely distributed in India and is used by the natives against flies and other insects.

**EUCALYPTUS** plantations are situated chiefly in the neighbourhood of Ootacamund, Coonoor, and Wellington, at elevations varying from 5,500 to 8,400 feet, the best being at from 7,200 to 8,000 feet. The climate of this region is fairly cool, equable and moist, with a well-distributed rainfall of about 50 to 80 inches; although frosts occur, the winters are mild on the whole, and snow is unknown. The soil, a red clay overlying gneissose rock, is rich and deep in some parts, shallow and poorer in others. A large factory is being built for the distillation of eucalyptus oil at Ootacamund. It is believed there is a considerable future for the undertaking, provided a sufficient supply of the leaves is available.

### Manufacture of Quinine.

Government Cinchona plantations were started in India in 1862 from seed introduced by Sir Clements Markham from South America, of which the plant is a native. There are two main centres, Darjeeling and the Nilgiri Hills. In both localities a portion of the area is owned by tea or coffee planters, and the bark they produce is either sold to the Government or exported. Several species of cinchona are cultivated in India: namely, *Cinchona succirubra* (red bark), *C. calisaya* and *ledgeriana* (yellow bark), and *C. officinalis* (crown bark). The commonest species in Darjeeling is *C. ledgeriana*, and in Southern India *C. officinalis*. A hybrid form is also largely grown and yields a good bark. At the Government factories both cinchona febrifuge and quinine are made. Thanks to these factories, practically no quinine is nowadays imported for Government purposes.

THE REPORT OF THE GOVERNMENT CINCHONA plantations and factory in Bengal for 1913-16 stated that from 1900 to 1916 the total expenditure amounted to Rs. 42,65,000 and the total receipts to Rs. 39,30,000. The deficit, however, was incurred within the period 1905-14, during which time great improvements were carried out in the Department. In view of the fact that the world's demand for quinine was exceeding the output and there was danger of the abolition of the open market in the drug, it was decided to purchase large quantities of bark and quinine at the low prices then ruling and at the same time to extend the plantations so as to render the Department independent of external supplies. The outcome of this policy was highly satisfactory and in two years, 1913-15, the saving to the Government was at least Rs. 4,66,000. The deficit, the report stated, would be speedily replaced by a surplus, yearly increasing, and meanwhile it was covered many times over by readily realisable assets. These assets included additions to factory and machinery

that have quintupled its output, 2,295 acres planted with cinchona valued at Rs. 7,69,000, a reserve of quinine of the value of nearly Rs. 19 lakhs, and other manufactured products and bark valued at Rs. 2,05,055, making a total of Rs. 29,18,000. One of the most far-reaching measures of modern times for the benefit of the health of the people of India has been Sir George King's system of having quinine, locally produced from cinchona, made up in 7-grain packets and sold since 1896-7 for a quarter anna (one farthing) at every post office in India. This scheme has proved a commercial success, and has been of immense benefit to the inhabitants of fever-stricken tracts. In the year 1912-13, 10,694 lbs. of quinine were sold at the post offices.

### Intoxicating Drugs.

Among the drugs which are of great medicinal value, but of which the misuse has been a source of crime and disease among the people of India, there are, in addition to cocaine, **Opium** (for details of the trade see article on opium) which is the oldest and the best known. A resolution of the Government of India, dated August 19, 1912, adopted the policy of suppressing all public gatherings for the purpose of smoking opium and of prohibiting all manufacture of opium smoking preparations save by an individual of a small quantity for his own private consumption. The form which legislation should take was left to the local Governments, provided that an assembly of three or more persons for the purpose of smoking opium should be made illegal. In adopting this policy Government distinguished between opium smoking and opium eating. "Opium, said the Resolution, as taken in moderation by the average Indian is eaten either as a mild stimulant, or as a

prophylactic against malaria, or for the relief of pain or in the treatment of diabetes. It is in fact a house-hold remedy for many ills, and it is safe to say that as a national habit the eating of opium is less injurious than is the consumption of alcohol in many other countries. Centuries of inherited experience have taught the people of India discretion in the use of the drug, and its misuse is a negligible feature in India life. These conclusions were accepted by the Shanghai Commission (of 1909) who, while they recommended the gradual suppression of the practice of opium smoking, refrained from advising the abandonment of the policy of regulation by which the practice of opium eating in the country has hitherto been successfully kept under restraint."

Next to opium and cocaine, the most common drugs are the three **hemp** products which are freely used throughout British India. The Indian hemp is a shrub growing wild in the hills and lower elevations, and cultivated in the plains. The leaves of the wild plants, collected and dried in the sun, constitute **bhāng**, a sort of green tea, which is mixed with boiling water and drunk as an infusion. This has an exhilarating effect, followed by a feeling of intoxication. When the female plants are cultivated they exude a resinous juice, which causes the flowering tops to stick together. Collected under these conditions the tops are rolled in the hands or pressed under foot, the first process produces "round gānga," and the second "flat gānga." **Gānga** is a stronger form of hemp than bhāng, and is used for smoking. The third form of Indian hemp is **charas**, the resinous secretion of the plant that develops when it is grown at certain altitudes. Large quantities of charas are produced in Chinese Turkestan, and enter India by way of Leh. This is sold over the northern part of the country, and used for smoking purposes.

## The Cocaine Traffic.

The form of cocaine chiefly used in India is Cocaine Hydrochloride. This salt forms light shining crystals, with a bitterish taste, and is soluble in half its weight of water. The alkaloid cocaine—of which this is a salt—is obtained from the dried leaves of the Erythroxylon Cocaine which grows in Bolivia, Peru, Java, Brazil and other parts of South America. The leaves are most active when freshly dried and are much used by the Natives as a stimulant. Tea made from them has a taste similar to green tea and is said to be very effectual in keeping people awake. In India the Coca plant seems never to have been cultivated on a commercial scale. It has been grown experimentally in the tea districts of Ceylon, Bengal and Southern India and has been found to produce a good quality and quantity of cocaine. As the plant has not been seriously cultivated and as there is no possibility for the present of the drug being manufactured in India, no restrictions have as yet been placed on its cultivation.

**Spread of the habit.**—The cocaine traffic in India which seems to be reaching alarming proportions in spite of legislation and strict preventive measures is of comparatively recent growth; though it is impossible to estimate how widespread it was in 1903 when the Bombay High Court for the first time decided that cocaine was a drug included within the definition of an intoxicating drug in the Bombay Abkari Act. Since that date the illegal sale of cocaine in India has largely increased and the various provincial Excise Reports bear witness to the spread of the "Cocaine habit." The consumers of the drug, which is notoriously harmful, are to be found in all classes of society and in Burma even school children are reported to be its victims; but in India as in Paris the drug is mostly used by prostitutes or by men as an aphrodisiac. The habit has spread chiefly to those classes which are prohibited by religion or caste rules from partaking of liquor and the well known Indian intoxicating drugs.

**Imports from Europe.**—Cocaine and its allied drugs are not manufactured in India, but are imported from Germany, France, England and Italy. Most of the drug which is smuggled into India, comes from Germany and bears the mark of the well-known house of E. Merck, Darmstadt. This firm issues cocaine in flat packets of various sizes ranging from 1 to 3 ounces which are easily packed away with other articles and greatly favour the methods of smugglers. Owing to its strength and purity cocaine caters prefer this brand to any other in the market. Restrictions on export from Europe have been under consideration for some time but as yet no international scheme devised to that end has been agreed upon.

**Smuggling.**—So far as the cases already detected show, the persons who smuggle the drug by sea from Europe and places outside India, into India, are chiefly sailors, stewards, firemen and sometimes engineers and officers of the Austrian Lloyd and Florio Rubattino S. S. Companies. The ports through which cocaine enters India are Bombay, Karachi, Calcutta, Madras, Marmagao and Pondicherry. The main inland distributing centres are Delhi, Lucknow, Meerut, Lahore, Mooltan, Surat and Ahmedabad. Delhi especially is notorious

for the cocaine trade. Great ingenuity is employed in smuggling cocaine through the Custom houses. It is packed in parcels of newspapers, books, toys and piece-goods and in trunks which have secret compartments. The retail trade in the towns is very cunningly organized and controlled. In addition to the actual retailers, there is a whole army of watchmen and patrols whose duty is to shadow the Excise and Police Officials and give the alarm when a raid is contemplated. In spite of these precautions many big seizures have been made in Bombay, Calcutta, Karachi and elsewhere. In Bombay all Austrian and German ships are watched day and night by special officers during the whole time the vessels are in port. This has resulted in smaller quantities being landed. The total quantity of cocaine seized in the Bombay Presidency during 1913-14 consequently fell to about 850 ounces. There was a further reduction in 1914-15 as only 635 ounces were seized; and for this the war is responsible. The amount seized in 1915-16 was 160 ounces.

**Price.**—The amount seized is either given to hospitals in India or destroyed. It is no longer possible to buy cocaine from any betel-nut seller as it was ten years ago, but scores of cases in the Police Courts show that the retail trade thrives, though to a diminished extent, in Bombay. High profits ensure the continuance of the trade. At present the English quotation is 12 shillings per ounce and the price as sold by licensed chemists in India is about Rs. 17 per ounce. Owing to the war and the consequent stoppage of illicit importations from Austria and Germany it is not possible to buy the smuggled drug from the wholesale dealers for less than Rs. 80 to 85 per ounce and when sold by the grain the price realized varies from Rs. 300 to Rs. 360 per ounce. These profits are further enhanced by adulteration with phenacetin and inferior quinine.

**The law in regard to Cocaine.**—This varies in different provinces. A summary of the law in Bombay is as follows: No cocaine can be imported except by a licensed dealer and importation by means of the post is entirely prohibited. The sale, possession, transport and export of cocaine are prohibited except under a license or permit from the Collector of the District. A duly qualified and licensed Medical practitioner is allowed to transport or remove 20 grains in the exercise of his profession; and as far as 6 grains may be possessed by any person if covered by a *bona fide* prescription from a duly qualified Medical practitioner. The maximum punishment for illegal sale, possession, transport, etc., under Act V of 1878 as amended by Act XII of 1912 is as follows. Imprisonment for a term which may extend to one year or fine which may extend to Rs. 2,000 or both and on any subsequent conviction imprisonment for a term which may extend to 2 years or fine which may extend to Rs. 4,000 or both. The law in Bombay is being further amended so as to enable security to be taken from persons who have been convicted of cocaine offences. The new Act also contains a section for the punishment of house owners who let their houses to habitual cocaine sellers.

## INDIAN TOBACCO.

The tobacco plant was introduced into India by the Portuguese about the year 1805. As in other parts of the world, it passed through a period of persecution, but its ultimate distribution over India is one of the numerous examples of the avidity with which advantageous new crops or appliances are adopted by the Indian agriculturist. Five or six species of *Nicotiana* are cultivated, but only two are found in India, namely, *N. Tabacum* and *N. rustica*. The former is a native of South or Central America, and is the common tobacco of India. About the year 1829 experiments were conducted by the East India Company towards improving the quality of leaf and perfecting the native methods of curing and manufacturing tobacco. These were often repeated, and gradually the industry became identified with three great centres: namely, (1) Eastern and Northern Bengal (more especially the District of Rangpur); (2) Madras, Trichinopoly, Dindigul, Coconada and Calcutt in Southern India; and (3) Rangoon and Moulmein in Burma. Bengal is the chief tobacco growing Province, but little or no tobacco is manufactured there. The chief factories are near Dindigul in the Madras Presidency, though, owing to the imposition of heavy import duties on the foreign leaf used as a cigar wrapper, some cigar factories have been moved to the French territory of Pondicherry.

The question of improving the quality of Indian tobaccos has received the attention of the Botanical section of the Agricultural Research Institute, Pusa, and three Memoirs have been published recording the results of investigations in that direction. The immediate problem at Pusa is the production of a good cigarette tobacco. Many attempts have been made in the past to introduce into India the best varieties of cigarette tobacco from America, but the results have been disappointing. It is now hoped to build up by hybridization new kinds of tobacco, suited to Indian conditions of growth, which possess in addition the qualities necessary to obtain a better price.

Mr. James McKenna in his recent report on "Agriculture in India" writes,—

"The ordinary Burman and Indian cigar has an increasing popularity—about 1½ million pounds are exported—and exports increase. It is a cheap and a good cigar, but it is capable

of improvement, principally by a better outer leaf or wrapper of finer tobacco. We should therefore aim at increasing the outturn of genuine Indian cigars, improved, as they can be, without loss of their individuality, by the selection of leaf, and at decreasing the imports of foreign cigarettes by producing tobacco suitable for this purpose. The present coarse varieties seem to meet the local taste and that of our main export markets, which are Aden and its Dependencies and the Far East. There is, however, no reason why these local varieties should not be brought to their highest perfection by selection or why improvements should not be possible in curing. The most pressing commercial problem, however, is to oust the foreign cigarette. This question has been taken in hand in Bengal and Bombay, where efforts are being made to establish exotica. These have met with only qualified success. We can only say, so far, that experiments continue, but whether they will prove commercially successful remains to be proved and indeed seems somewhat doubtful." That the process of ousting the foreign cigarette is well advanced may be seen from the latest report on the Maritime Trade of Bengal, which remarks "The cheap Indian-made cigarette continues in great demand, the largest supplying centre being Monghyr, where perhaps the most up-to-date factory in the world turns out incredible quantities daily. From the railway station for this factory no less than 4,516 tons were exported in 1915, with a liberal calculation for tare, this amounts to about 1,759·45 million cigarettes."

The area under tobacco in British India was 1,002,000 acres in 1913-14 as compared with 965,000 acres in 1912-13 and 999,000 in 1911-12. The following statement shows the imports and exports of tobacco by sea from and to foreign countries in 1915-16,—

EXPORTS		lbs.	Rs.
Unmanufactured	..	24,250,000	30,10,000
Cigars	.. ..	1,558,000	12,54,000
Other Sorts	.. ..	538,000	1,28,000
IMPORTS		lbs.	Rs.
Cigarettes	.. ..	1,686,000	63,05,000
Other Sorts	.. ..	751,000	17,10,000

## Calcutta Improvement Trust.

The Calcutta Improvement Trust was instituted by Government in January, 1912, the preamble of the Act by which it is founded running as follows:—"Whereas it is expedient to make provision for the improvement and expansion of Calcutta by opening up congested areas, laying out or altering streets, providing open spaces for purposes of ventilation or recreation, demolishing or constructing buildings, acquiring land for the said purposes and for the re-housing of persons of the poorer and working classes displaced by the execution of improvement schemes."

The origin of the Calcutta Improvement Trust must, as in the case of the corresponding Bombay body, upon which the Calcutta Trust was to a large extent modelled, be looked for in the medical enquiry which was instituted into the sanitary condition of the town in 1896, owing to the outbreak of plague. In consequence of the facts then brought to light, a Building Commission was appointed in April 1897, to consider what amendments were required in the law relating to buildings and streets in Calcutta. That Commission recommended certain alterations in the law, and further suggested that a scheme should be prepared for laying out those portions of the town which were sparsely covered with masonry. While unable to go into details, they recommended that in quarters newly laid out the roads and open spaces should occupy at least as much ground as the building areas. As regards existing evils, they thought that it was impossible to demolish any considerable portions of the City. All that could be done was to open out a number of wide streets and some open spaces. The Government of Bengal, when it proposed to give effect to the recommendations of the Commission, adopted, as the work to be done, a scheme for constructing and improving 15½ miles of roads which had been drawn up by the Commission. This scheme formed the basis of discussion till 1904, when a Conference was convened by Sir Andrew Fraser, then Lieutenant-Governor of Bengal. It was estimated that the Trust might in the ensuing 30 years have to provide for the housing of 225,000 persons, who would occupy 2,000 acres. The population of Calcutta proper, which includes all the most crowded areas, was 649,995 in 1891, and increased to 801,251, or by 25 per cent., by 1901. The corresponding figure according to the 1911 Census was 896,067.

The Conference of 1904 recognised that in view of the peculiar situation of Calcutta, which is shut in on one side by the Hooghly and on the other by the Salt Lakes, its extension in a regular zone is impossible. The Conference, after carefully considering the question, came to the conclusion that "arms" or "promontories" should be thrown out in five directions: on the north, north-east, east, south and south-east, and south-west. In these promontories it was easy to foresee that expansion would take place along the lines indicated by certain roads. It is for this reason that the Government of Bengal made the proposal that the Trust should have power to project roads to the outskirts of Calcutta.

It was seen that strips of land lying along or in the neighbourhood of these roads should be acquired by or for the Trust and would be dealt with by them as model areas. In the remaining part of the extension, according to the Government's plan, the Trust would have no proprietary rights over the land, but they would administer the building regulations and by this means would secure that all houses erected by private owners were constructed on a standard plan and in conformity with sanitary requirements.

### Legislation.

The recommendations of the 1904 Conference eventually took legislative form in a Bill introduced in the Bengal Legislative Council in August, 1910. This measure was built up on the recognition by the Government that the 15 miles road scheme only touched the fringe of the question of overcrowding and sanitation. The Bill, therefore, provided for a scheme of greatly enlarged scope. The amount of money required was roughly estimated at Rs. 8,22,00,000. It was recognised that a great deal more could be spent with advantage, and the figure was not put forward as representing the actual cost of any definite scheme, but as a rough estimate of what would be required for any scheme of wide and permanent utility. The total sum was divided into Rs. 500 lakhs for new roads, Rs. 172 lakhs for open spaces and Rs. 150 lakhs for housing and expansion. Of these sums Rs. 336 lakhs were to be recovered by recoupment, 50 lakhs were granted from Imperial revenues, and the remainder was left to be raised by loans. The sanction of the Secretary of State was obtained for the proposals generally on the understanding that the scheme of taxation would be for 60 years. The legislative enactment, while based on these calculations, does not actually refer to any limit of expenditure. But the Act provides a special system of taxation for the service of the loans, amounting to Rs. 436 lakhs, involved in the scheme. For this service an annual revenue of 19·65 lakhs was required and to this have to be added 1·25 lakhs for working expenses and contingencies, bringing the total up to 20·90 lakhs. To provide this revenue the Act provides for the levy of special taxes as follows:—

- A two per cent. stamp duty on the value of all immovable property transferred by sale, gift or reversion of mortgage;
- A terminal tax of one anna on every passenger by rail or steamer arriving in the city of Calcutta; this is not to be levied on passengers from within a radius of 30 miles of Calcutta;
- A customs and excise duty, not exceeding two annas per bale of 400 lbs., on raw jute;
- A two per cent. consolidated Corporation rate; and
- An annual Government grant of a lakh and a half.

The Act provides for the appointment of a whole time chairman of the trustees and the membership of the Trust was fixed at eleven,

part of the members being nominated by Government and others elected by local bodies whose interests are most nearly concerned.

The following are the present Board of Trustees:—The Hon'ble Mr. C. H. Bompas, I.C.S., *Chairman*. The Hon'ble Mr. C. F. Payne, I.C.S., *Chairman* (ex-officio); The Hon'ble Raja Reshee Case Law, O.I.E., elected by the Corporation; The Hon'ble Rai Radha Charan Pal, Bahadur, elected by the Ward Commissioners; Dr. Charles Banks, elected by the Commissioners appointed under Sec. 8 (2) of the Calcutta Municipal Act, 1899; Mr. W. K. Dods, elected by the Bengal Chamber of Commerce; The Hon'ble Rai Sitanath Rai Bahadur, elected by the Bengal National Chamber of Commerce; Sir R. N. Mookerjee, K.C.I.E., Sir F. H. Stewart, Kt., C.I.E.; The Hon' Mr. A. Birkmyre and Rai Annada Prosad Sarkar, Bahadur, appointed by the Bengal Government.

### The Board and their Work.

It was impossible to settle in advance the exact projects to be undertaken by the Trust. All details of these were, therefore, left to be worked out by the Trust after its constitution, Government exercising control by having all the individual schemes sent to them for approval before execution. The Trust did not enter on a virgin field. The Municipal Corporation had previously dealt in some measure with the problems they were appointed to solve and the Trust started work with the initial benefit of this previous labour. Thus, the Corporation had aligned many roads and this work was useful to the Trust, though in some cases modifications were necessary.

The work upon which the Trust are now definitely embarked may be divided into three classes as follows:—

Many parts of Calcutta are over-crowded with buildings and ill-provided with roads. These areas are to be re-arranged both on the ground of sanitation and for convenience of traffic;

Population will continue to throng into the overcrowded parts unless it can live on the outskirts and at the same time have speedy access to the business centres of the town. Quick traffic can only take place along broad roads. These are almost wanting in Calcutta. The construction of broad roads will at the same time ventilate the overcrowded parts of the town and it has been recognised from the outset that the construction of broad roads running both north and south and east and west will thus secure a double object;

There is the question of providing for the population displaced by improvements, and still more important of providing for the natural growth of population by laying-out roads and building sites on sparsely populated areas on the outskirts of the town. When persons of the working class are displaced or likely to be displaced the Trust can build dwellings for them if private enterprise does not undertake the work.

### Engineer's Survey.

The Trust perceived at once that the problem of providing improved traffic facilities for Calcutta and its suburbs must be dealt with as a single problem and by a single mind. The first duty set by the Trust to their chief engineer was, therefore, to prepare a scheme of main roads of primary importance. The chief engineer Mr. E. P. Richards, M.I.C.E., &c., devoted his whole attention to this task and his report was issued early in 1914. Mr. Richards' report, which was accompanied by maps and numerous photographic illustrations, made a volume of 400 closely printed foolscap pages. He found Calcutta "a city which is in a very much more than ordinary bad way", and early discovered the serious fact that "the Calcutta Improvement Act of 1911 was almost useless for the great task set to the Trust". The Trust was not constituted under a Town Planning Act but only under a local Housing Act, so that "Calcutta and her suburbs cannot possibly be jointly planned or controlled, or be moderately improved, under the existing Improvement Act." Mr. Richards' report deals with the general conditions and needs of the city and the general policy of reform, with the general legislative and financial aspects and with the main programme of work. He discusses the Calcutta of to-day, showing the chief faults as to which improvements are required. A comparison is made between Calcutta and other cities, by way of illustrating Calcutta needs, and in this manner finance, roads and streets per square mile, road and street widths, percentage of open spaces, tramway mileage per head of population, the status of the city as a port, and so on, are fully dealt with. An important chapter deals with the Calcutta slums and makes recommendations as to what should be done in regard to them. Another chapter discusses the general problem of city improvement and another is devoted to suburban planning and developments.

### Improvement Schemes.

The Engineer submitted early in 1915 an interesting report on the widening of Howrah Bridge. Meanwhile, the Board undertook certain improvement schemes which would not be interfered with by any larger schemes adopted later. The Board also embarked on a re-housing scheme with a view to provide accommodation for persons likely to be displaced by the improved schemes under preparation. The buildings designed resemble those erected by the Bombay Improvement Trust. The scheme was sanctioned by Government in August, 1912, but its execution has proved more expensive than was anticipated, mainly owing to the rise in the price of building materials. The following paragraph from the Calcutta Improvement Trust's first annual report shows the standard according to which they regard their re-housing plans:—

"The housing problem in Calcutta is of supreme importance; the figures of the last census show that much of the improvement in the health of Calcutta is only apparent; the sanitary measures of the Corporation result in the removal of bustees and the popu-

lation which occupied the bustees does not find healthier accommodation in the same locality but moves on to even more insanitary bustees in the suburban wards or in the adjacent suburban municipalities. The Board do not anticipate, nor do they desire, that the chawl should become the usual dwelling for the poor of Calcutta, but it may be suitable to some classes of its heterogeneous population, and especially to those who come here for work, leaving their families behind. It is very difficult to see what other class of building can be erected by the capitalist where land costs more than Rs. 600 a cottah. On really cheap land it is possible that good results could be obtained by arranging for the construction of sanitary bustees, the Board merely laying-out and defining the site and controlling the class of hut erected." The Board undertook the erection of three blocks of buildings as an experiment. The cost of the land worked out at Rs. 832 a cottah. It is recognized in England that the working classes cannot profitably be housed on land costing more than £300 an acre, or Rs. 75 a cottah. There will, therefore, be a loss on the Calcutta experiment, as was anticipated by the Board from the outset. "It appears, therefore," say the Trustees in their 1914 report, "that the buildings would show a fair return of capital if the rooms in the two upper storeys were let out at Rs. 6 a month, those on the ground floor at Rs. 5 a month and the shops at Rs. 10."

The Board believed the buildings to be much cheaper than anything of the kind hitherto erected in Calcutta, and applications received showed that "there would apparently be no difficulty in filling a building with tenants of the Bengali middle class, if the whole building or the two upper storeys of each block were exclusively reserved for their use. The

Board, however, in their 1914-15 report, stated that they "consider that it is most important to ascertain what rent can be paid and what accommodation is required by the artisan and labouring classes. They have, therefore, decided to let the rooms at lower rates to artisans and labourers and if the buildings once become popular, it will doubtless be possible to raise the rents at a later period."

A year's experience on these lines shows that the buildings were popular, though they did not become fully occupied, and the rent recovered gave a return of 8 per cent. on the capital expenditure. The Trust in their last report say that one reason why the dwellings are not fully occupied is probably the fact that in the search for cheap land the Trust placed the buildings too near the boundary of the Municipal Corporation area. "People of the poorer classes who are willing to live so far from the centre of Calcutta generally prefer to cross the boundary into Maniktila Municipality, which is only a hundred yards away and where rent and rates are less, though the sanitary conditions are deplorable". The Trust find reason to believe that similar buildings near the centre of Calcutta would let at more remunerative rates.

Thirteen improvement schemes were sanctioned by Government up to the end of 1915-16. The estimated cost of these schemes is—

Land—gross .. ..	207 lakhs.
„ nett .. ..	46 „
Works .. ..	53 „

and they provide for 8.8 miles of new roads and 8.3 miles of widened roads. A new Act passed in 1915 gives the Trust power to lay down lines of projected streets and prohibit the erection of buildings within them.

## BOMBAY IMPROVEMENT TRUST.

Bombay is an island twelve miles long, but very narrow and containing only 22 square miles altogether, but in the city, occupying little more than half the island, there lives a population enumerated at 972,892 and actually totalling over a million. Bombay is, in point of population, the second city of the British Empire. Seventy-six per cent. of its million people live in one-roomed tenements. Imagine the terrible conditions of overcrowding and lack of sanitation which these facts imply and you have the reason why the severe onset of plague seventeen years ago led to the formation of the Improvement Trust, for the special purpose of ameliorating the sanitary condition of the city. Plague was imported into India from the Far East and was first discovered in Bombay in 1896. There was a great panic among the population. Every house had its victims, most persons attacked died. There was a general flight of the population to the country districts. It is estimated that nearly half a million so fled. Grass grew in the principal streets. These circumstances directed the attention of the authorities, as nothing else could have done, to the problem of bringing the development and housing arrangements of the city into line with modern requirements.

It was at once recognised that the task was too great for the Municipality, and a special body, termed the Trustees for the Improvement of the City of Bombay, was appointed. It consists of 14 members, of whom four are elected by the Municipality and one each by the Chamber of Commerce, the Millowners' Association and the Port Trust, and the balance nominated by Government, or sit *ex-officio* as officers of Government. The Board is presided over by a whole-time chairman, who is either a covenanted civilian or an officer of the Public Works Department, and he is also head of the executive. The present chairman and members of the Trust are as follow:—

### Chairman—

The Hon. Mr. J. P. Orr, C.S.I., I.C.S.

### Ex-officio Trustees—

Brig.-General W. C. Knight, C.B., D.S.O.  
A.D.C., General Officer Commanding  
Bombay District.

Mr. W. C. Shephard, I.C.S., J.P., Collector  
of Bombay.

Mr. P. W. Monie, I.C.S., J.P., Municipal  
Commissioner.



**Elected by the Corporation—**

Sir Bhaichandra Krishna Bhatawadekar,  
Kt., L.M., J.P.

Mr. Dinsha Edulji Wacha, J.P.

The Hon'ble Sir Ibrahim Rahimtoola,  
Kt., C.I.E., J.P.

Mr. Cowasji Jehangir Readymoney, J. P.

**Elected by the Chamber of Commerce—**

Mr. A. M. Toi, J. P.

**Elected by the Port Trustees—**

Sir F. L. Sprott, J.P.

**Elected by the Millowners' Association—**

Sir Sassoon David, Bart., J.P.

**Nominated by Government—**

Mr. A. H. Whyte, J.P., Executive Engineer, Presidency.

Major H. A. L. Hepper, R.E., J. P.

The Hon. Mr. Lalubhai Samaldas Mehta,  
C.I.E., J. P.

The specific duties of the Trust are to construct new streets, open out crowded localities, reclaim lands from the sea to provide room for expansion, and construct sanitary dwellings for the poor.

**The Sanitary Problem.**

Bombay city grew on haphazard lines, houses being added as population poured in with the growth of trade and without any regard to town planning or the sanitary requirements of a great town. The price of land was always comparatively high, owing to the small area of the island, and while the builder had only one object in view, namely, to collect as many rent paying tenants as possible on the smallest possible piece of land, there were no proper restraints to compel him to observe the most ordinary rules of hygiene. The result was the erection of great houses, sometimes five and six storeys high, constituting mere nests of rooms. There was no adequate restriction as to the height of these chawls, or the provision of surrounding open space, so that the elementary rules as to the admission of light and air went unobserved and the house builder invariably erected a building extending right up to the margins of his site. Consequently, great houses accommodated from a few hundred to as many as four thousand tenants were built with no more than two or three feet between any two of them and with hundreds of rooms having no opening at all into the outer air.

The Trust has practically reconstructed large areas on modern sanitary lines, but the old municipal by-laws having unfortunately remained quite inadequate for the requirements of the city, the Trust have spent millions sterling of public money in sweeping away abuses, while unscrupulous landlords, still unchecked, added in the same old manner to the insanitary conditions of the place. Thus, the Trust acquire and destroy insanitary houses on a certain area and lease the sites and permit new houses to be built on them subject to the reservation of a certain breadth of open ground round the edges of the site to provide for the necessary angle of light and air for the lower rooms of the new building. But bordering on this area there will

be old houses that were not acquired as part of the improvement scheme and the municipal by-laws have allowed the owners of these to increase their height by as many storeys as they like, without regard to the fact that they were thus undoing the very work of providing for the admission of light and air upon which the Trust had just poured out money. The private landlords have taken the fullest advantage of the loophole. The amendment of the Municipal by-laws so as to cure such abuses has been under discussion by the Municipal Corporation for many years and improved by-laws have been prepared. They are still under consideration by the Municipal Committee.

**Finance.**

The work with which the Trust was charged was bound to prove unremunerative, with the exception of reclamations from the sea, and at the outset, therefore, certain Government and Municipal lands were vested in the Trust, the usufruct of which it enjoys, and the Trust at the outset received a contribution from municipal revenues not exceeding 2 per cent. on the rateable value of the property assessed for taxation. In practice, the works are financed out of 4 per cent. loans, which are guaranteed by the Municipality and the Government, and the revenue of the Trust is used to meet interest and sinking fund charges. The Trust, proceeding on these lines, found itself, in 1910, at the end of its resources. When the Trust was constituted it was estimated that the usufruct on the public land vested in it would represent a contribution of Rs. 98,00,000 (£640,000) from the general taxpayer. But in practice this was reduced to less than Rs. 43,00,000 (£286,666). The Trust found itself with unpledged resources estimated at only Rs. 16,00,000 (£106,666). The Government of India came to its assistance with a cash grant of half a crore of rupees (£335,000), given out of a budget surplus, special legislation was carried through the Bombay Legislative Council in 1913 to increase the advantage of the Trust from Provincial and Municipal appropriations, and legislative measures were initiated to enable the Trust to raise money by special local taxation in Bombay. The cautious estimate of Rs. 16,00,000 also proved to have been below the mark. In the years following 1910, when the estimate was made, there was an improvement in the Trust's revenue, so that in 1913, after the amendment of the financial clauses of the Act and the grant of 50 lakhs by the Government of India, and in spite of important additions to the Trust's programme, the triennial financial forecast showed that the margin for expansion had increased to Rs. 95 lakhs. Inasmuch as the whole of this sum was required for completion of the Eastern Avenue, it was still necessary that the Trust should be provided with further funds for direct expenditure on improvement schemes. To this end a Bill was introduced into the Bombay Legislative Council on 16th December, 1913, providing for the levy of a surtax in stamp duty on conveyances of property in Bombay and for the payment of the net proceeds to the Trust. The Municipal Corporation, however, protested against the raising of the necessary funds at the expense

of the property owners of Bombay and suggested, as they and the Trust had already suggested in 1911, that an export duty on bales of cotton exported from Bombay should be levied instead. Government announced at the March, 1914, meeting of the Legislative Council that the Bill would be held over pending consideration of this suggestion. The matter has not yet proceeded further.

Meanwhile, the 1916 triennial financial forecast shows further important circumstantial improvement in the Trust's position, the result being to establish that after making full allowance for the worst probable effects of the war and full provision for all sanctioned schemes to the end of September, 1916, including the two Parel-road schemes, which it was supposed would exhaust the Trust's financial resources, the Trust have a margin of Rs. 122 lakhs for expansion of their programme. The main point for notice is that the new forecast shows the total loss on the 16 schemes included in the 1913 forecast as Rs. 309 lakhs against the corresponding figure of Rs. 352 lakhs estimated in 1913, an improvement of Rs. 49 lakhs, or 12 per cent, this improvement being for the most part made up of small items in several schemes:

"The salient features of the Trust's present sanctioned programme of 41 schemes are set out scheme by scheme and may be summarised for the whole programme as follows:—Capital spent on acquisition and works gradually rises from 629 lakhs at end of 1915-16 to 969 lakhs at end of 1944-45. Debt gradually rises from 508 lakhs in 1915-16 to 788 lakhs in 1924-25. Annual interest and sinking fund charges thereon gradually rise from 23 84 lakhs in 1915-16 to 35 85 in 1925-26. From 1929-30 they gradually fall as loans are paid off till they vanish in 1934-35. Permanent ground rents gradually rise from 11 07 lakhs in 1915-16 to 30 33 lakhs in 1946-47. Net annual revenue from estates rises from 1956 lakhs in 1915-1916 to 31 33 lakhs in 1956-57. From 1928-29 onwards the nett revenue gradually falls as scheduled lands revert in Government and the Municipality till when in 1929-30 none such remains with the Trust it reaches 25 11 lakhs. Margin for expansion of programme, Rs. 122 lakhs."

The Trust, in November, 1915, carried a recommendation of their Improvements Committee to ask their solicitors to draft an improvement to the Improvement Trust Act which would give the Board powers, similar to those provided for in the English Act for the housing of the working classes, to acquire parts of houses, to remove obstructing houses, and to levy betterment contributions from houseowners who benefit amendment being to enable the Trust to deal fitted by such Improvements, the aim of this with areas "represented" for improvement by the Municipal Corporation without the great expense of total demolition procedure. A draft from the solicitors is still under consideration by the Committee.

The following are some details of the Bill to amend the City of Bombay Improvement Act, which, as just mentioned, was passed by the Provincial Legislature. The main object of the Bill was to simplify the financial arrangements between the Government, the Municipality and the Trust and make them more

favourable to both the local bodies. Under the old Act, as already mentioned, the annual Municipal contribution to the Trust was an indefinite sum limited by a maximum of 2 per cent. on the Municipal assessments of the year. Under the Amended Act the Municipal contribution is a definite share of the year's general tax receipts, approximating to 2 per cent. on assessments and subject to no maximum, and the Trust keep their profits for their own use. Under the original Act, the Trust had from 1909 onwards to pay to Government and the Municipality 3 per cent. per annum as interest on the schedule value of the Government and Municipal lands vested in them, while Government and the Municipality were at liberty to resume any unleased, vested lands for public purposes without paying compensation, except in respect of capital spent by the Trust in improving them. Under the amended Act the Trust have no interest to pay, and Government and the Municipality must, on resuming vested lands, pay the Trust their full market value. There are other modifications of the old arrangements, similarly making for the financial benefit of the Trust. The new Act makes the Municipality the reversioners of the Trust's assets and liabilities. Apart from finance, the new Act contains important new sections under which the Trust are empowered to co-operate with employers of labour for the housing of the working classes by constructing chawls for their employees and leasing them to the employers at a rent calculated so as to yield to the Trust in the course of the 33 years of the lease the capital sum spent in the scheme, plus 4 per cent. interest, the chawls then becoming the property of the employers. The Trust are now co-operating with several millowners in schemes under these sections.

### Plan of operations.

The work of the Trust, so far as it has gone or is planned, can be divided into two parts. The first concerned the immediate alleviation of the worst burdens of insanitation and the second consists of opening up new residential areas. The Trust began by attacking the most insanitary areas. Two broad roads, running due east and west, were cut through the worst parts of the city, sweeping away a mass of insanitary property and admitting the healthy westerly breezes to the most crowded parts of it. These thoroughfares are known as Sandhurst-road and Princess-street. They are now practically completed, and the greater parts of them are already settled under the new conditions, with sites on both sides of them disposed of on long leases and many new buildings built and occupied. Meanwhile, large areas of good building land, lying idle for want of development works, have been developed and brought on the market, sold at remunerative rates and largely built upon. An instance of this development is the (Chauhati and Gamdevi) estates, the land overhung by Malabar Hill, between it and the native city. These were cut up with fine new roads and are now nearly covered with modern suburban dwellings. Two of the most insanitary quarters in the midst of the city have been levelled to the ground and rebuilt in accordance with hygienic principles. Sanitary chawls have

been built for about 20,000 persons. So much for the first phase of the Trust's labours.

The second phase, arising gradually out of the first and advancing along with its later stages, consists of the development of a new suburban area in the north of the island, beyond the present city, and the construction of great arterial thoroughfares traversing the island from north to south. The latter undertakings were originally known as the eastern and western avenue schemes, but the cost of land is rising so rapidly throughout the city, and the expense of new works is accordingly growing so heavy, that the western avenue has had practically to be abandoned and modified improvements of existing highways from south to north, on the western side of the city, substituted for it. The eastern avenue will run from the back of Crawford Market, the northernmost limit of the modern commercial city, directly north to the northern end of Superibagh-road, near the western entrance road to old Government House, Park, and have a width varying from 100 to 120 feet. It is divided into three sections. The first, starting from Crawford Market and reaching to Pydhonie, is already in the hands of the engineers for execution. The second, for which Parel-road requires widening, has been sanctioned by Government and the Improvement Trust are now acquiring the necessary properties for carrying it out.

Beyond the northern end of the Eastern Avenue, the north-east portion of the island, extending some three miles, consisted until recently of swampy rice lands, interspersed with bits of jungle and small hills and a few building areas. The Trust have acquired the whole area. A broad thoroughfare has been laid through the centre of it, with other roads connecting the outlying parts with the central road and with the railway stations. Some of the hills have been levelled and the material from them used to fill the low-lying parts of the estate. Development some time ago reached the stage of readiness for building in the half of the scheme nearest the city, and the Trust are now devoting their attention to facilitating private enterprise in this direction. Some building has already been commenced. The suburbs will probably become largely residential for people whose daily pursuits take them to the southern city, but its chief use will be for those whose avocations employ them in the large new port extension which the Port Trust are carrying out at the north of the present port and where the new cotton green and grain yards will be situated. The Port Trust have reclaimed 596 acres of land from the north of the harbour, at a cost of £1,833,333, and the whole of the export trade of the port will be concentrated in this new area and in that adjoining it, at Mazagaon and Sewri.

### Statistics.

The following are some statistical details of the progress of the Trust's operations. By the end of 1915-16 the Board had raised Rs. 568 lakhs (face value, nett receipts being Rs. 560 lakhs) by loans and their total capital receipts including 50 lakhs received from the Government of India in 1911 and 4 lakhs from the Government of Bombay in 1913, amounted

to Rs. 659 lakhs, out of which they had spent 32 lakhs on improvement of Government and Municipal lands temporarily vested in them, Rs. 595 lakhs on their own acquired estates and 3 lakhs on their office building. The following table, taken from the Trust's official report shows the extent of the development operations carried out by the Trust up to the end of the official year 1915-16 :—

Developed Land.	Sq. yards in thousands,
Permanently leased .. ..	895
Chawl sites .. ..	70
Yet to be permanently leased ..	296
Remainder roads, open spaces, etc. .. ..	509
Total .. ..	1,776
Rent of permanently- leased area .. ..	Rs 12·7 lakhs
Area of undeveloped land in thousands of square yards .. ..	5,274
Cost of acquisition .. ..	Rs. 540 4 lakhs

The disposal of plots on the Trust's newly developed estates is now progressing at a favourable rate. Practice shows that for obvious reasons the disposal of plots proceeds most slowly when an estate first becomes available for leasing to the public. When the first plots have been taken up and house building begins to assume definite proportions the remaining sites pass off without difficulty. The number of plots disposed of in the year was a record, being well above the normal of the two years preceding the outbreak of war, and just double the average of the previous four years. The year's record was surpassed only by that of 1913-14 in point of area and only by those of 1906-07 and 1912-13 in point of value. The set back resulting from the outbreak of war in 1914-15 has been more than made good, for the average area disposed of per annum in these last two war years beats the record for any previous year except 1913-14. Great progress was made on the Gamdevi Estate, where, mainly as the result of the division of large plots into smaller ones, 22 plots, having a rental of Rs. 15,876 per annum, were disposed of. This improved demand for the plots on the Trust's residential estates is a very satisfactory and encouraging feature of the year and has been well maintained in 1916-17. It seems to indicate that the public are at least beginning to appreciate the advantages of the Trust's method of laying out their estates with a prescribed margin of land to be kept permanently free of building on each plot, in such a way that each lessee gets the benefit of the open spaces in his neighbour's plot as well as those in his own.

By the beginning of 1915-16 completion certificates had been issued for 346 buildings on the Trust Estate, exclusive of Police chawls and Trust chawls. In 1915-16 certificates were granted for 46 new buildings.

### The Working Classes.

The average total population in the Trust chawls and semi-permanent camps was 17,148 in 1915-16. The total rent of the 4,380 rooms in Trust's chawl at the maximum rates works out to Rs. 2,31,690 per annum. The maximum for 1915-16 was Rs. 2,29,875, or 99 per cent. of the total recoverable Rs. 2,29,354, plus previous arrears of Rs. 2,380. The difference between Rs. 2,31,690 and Rs. 2,29,354, viz., Rs. 2,336 is due to vacancies. The percentage of outgoings to gross chawl revenue is found to be approximately 34.97 per cent. (against 33.55 per cent. in the proceeding year) this proportion being higher than in the case of private chawls mainly because private owners spend far less than the Board on the sanitation of their chawls. On the basis of the maximum annual rent of Rs. 2,31,690 and outgoings at 34.97 per cent., the net annual income of chawls works out at Rs. 1,50,668, i.e., 3.71 per cent on the cost a chawls (including value of land) amounting to Rs. 40,66,412 on which the Board pay annual Interest and Sinking Fund charges at 4.61 per cent. amounting to Rs. 1,87,461, which is Rs. 29,293 than the net annual income as worked out above. The average population of which was 13,970 during the year under review.

With the one exception of the old Nagpada chawls where there are special conditions the death rate in the Trust's permanent chawls has always been considerably below the general death rate in the vicinity. The smallest one-room tenement on the Trust Estate is large enough for a family of five.

### A New Method.

A further development of method in dealing with insanitary areas is now in prospect. It has already been recognised that estimates on the old wholesale demolition lines would

be prohibitively expensive for the large "re-presented" areas remaining to be dealt with, owing to the constantly increasing cost of property and work, and could benefit only small areas surrounded by larger areas in which insanitary conditions are always going from bad to worse with the extension of building operations, under the lax Municipal by-laws already referred to. It is recognised that what is wanted is some general scheme of improvement that can be applied all over the city and some means of putting an immediate check to the spread of further insanitary evils through the weakness of the by-laws, especially in relation to the lighting and ventilation of one-roomed tenements. The Trust officers have devoted much time to studying this question and the chairman some time ago propounded a scheme by which all inadequately lighted and ventilated rooms in Bombay might be closed gradually and house-owners required, with some assistance from public funds, to reconstruct their houses, so that all rooms in them used for dwellings might have sufficient light and air. The scheme attracted the attention of Government, who appointed a representative committee to consider the new plan. This committee submitted a report generally approving the suggestions and it was hoped that by the end of 1915-16 solid progress towards the prevention of the development of slums would be recorded. The report was sent to the Corporation, who were asked to frame by-laws.

During the past two years there has been an important movement towards the establishment of co-partnership housing societies on the Board's Estate and the Board regard the new departure as one deserving every encouragement at their hands, especially in connection with the disposal of land in their Garden Suburb in the north of Bombay Island.

## The Indian Ports.

The administration of the affairs of the larger ports (*Calcutta, Bombay, Madras, Karachi, Rangoon and Chittagong*) is vested by law in bodies specially constituted for the purpose. They have wide powers, but their proceedings are subject in a greater degree than those of municipal bodies to the control of Government. Except in Calcutta, the elected members are fewer in number than the nominated members. At all the ports the European members constitute the majority and the Board for Rangoon consists wholly of European members.

The income, expenditure and capital debt, according to the latest available figures, of the five principal ports managed by Trusts (Aden is excluded from the tables) are shown in the following table :—

—	Income.	Expenditure.	Capital Debt.
	£	£	£
Calcutta ..	963,357	1,035,923	6,610,619
Bombay ..	705,173	815,316	9,331,054
Karachi ..	238,431	252,088	1,749,362
Madras ..	215,873	203,417	724,871
Rangoon ..	302,552	275,322	1,742,308

In the Department of Statistics, India, the following returns have been compiled showing the ratios borne by the income and the expenditure of each port to the total income and the

total expenditure, respectively, of all the chief Indian ports during the year 1914-15 :—

—	Income per cent.	Expenditure per cent.
Calcutta ..	39·3	39·7
Bombay ..	28·8	31·2
Madras ..	8·8	7·8
Karachi ..	9·7	9·7
Rangoon ..	12·4	10·6
Chittagong ..	7·0	1·0

The official return of the Department of Statistics shows that in the ten years ending 1914-15, the income and expenditure of each port have increased as shown in the following table. The total income of all the ports has increased in the decade by 71·8 per cent. and the total expenditure by 93·6 per cent. :—

—	Increase per cent.	
	Income.	Expenditure.
Calcutta ..	61·4	79·3
Bombay ..	49·4	98·0
Madras ..	271·0	262·3
Karachi ..	46·4	82·1
Rangoon ..	137·2	80·3
Chittagong ..	190·7	156·6

The war has affected the trade of all the ports in a manner which makes it useless to continue comparisons up to date on the lines of the foregoing figures.

### CALCUTTA.

The Commissioners for the Port of Calcutta are as follows :—

*Appointed by Government*—The Hon'ble Mr. F. J. Monahan, I.C.S., Chairman; Mr. H. J. Hilary, Vice-Chairman, on leave. Mr. S. C. Williams, Offg. Vice-Chairman

*Elected by the Bengal Chamber of Commerce*.—Mr. A. C. Patterson (Becker Gray & Co) on leave; Mr. C. F. Bodel (Becker Gray & Co.) acting; the Hon'ble Mr. J. Mackenzie (Macnall & Co.), the Hon'ble Mr. E. H. Bray (Gillanders Arbuthnot & Co.); Mr. W. E. Crum (Messrs. Graham & Co.); Mr. D. Carmichael (Mackinnon Mackenzie & Co.), the Hon'ble Sir Francis H. Stewart, Kt., C.I.E (Gladstone Willie & Co.).

*Elected by the Calcutta Trades Association*.—Mr. E. C. Emerson (Francis, Harrison Hathaway & Co.).

*Elected by the Bengal National Chamber of Commerce*.—Babu Ambika Charan Law.

*Elected by the Municipal Corporation of Calcutta*.—The Hon'ble Raja Reshee Case Law, C.I.E.

*Nominated by Government*.—The Hon'ble Mr. G. C. Godirey (Agent Bengal Nagpur Railway);

Sir Robert D. Hight, Kt., (Agent, East Indian Railway), Mr. E. A. S. Bell (Agent, E. B. Railway) Mr. G. Laird MacGregor, I.C.S. (Collector of Customs) and Captain E. J. C. Horden, R.I.M. (Captain Superintendent, Kidderpore Dockyard).

The principal officers of the Trust are :—

*Secretary*.—Mr. S. C. Williams. (Mr. J. Mc Gluslan, offg.)

*Deputy Secretary*.—Mr. T. H. Elderton (on leave). (Mr. W. J. Good, offg.)

*Chief Accountant*.—Mr. N. G. Park, C.A.

*Chief Engineer*.—Mr. J. Scott, M. INST. C.E.  
*Consulting Engineer and London Agent*.—Mr. J. A. Angus, M. INST. C.E.

The income of the Trust in 1915-16 amounted to Rs. 1,59,35,456 against Rs. 1,44,50,349 in 1914-15. During the year 241 vessels, with an aggregate gross tonnage of 1,330,885, were accommodated at the jetties, compared with 212 vessels with a tonnage of 1,247,392 in the preceding year. In the same period 905 vessels were berthed at the docks, 26 being Government transports, as compared with 1,160 vessels in 1914-15. With the steady growth of trade

and shipping at the port, the Port Commissioners' income has expanded as follows during the last decade:—

Year.				Income. Rs.
1904-05	..	..	..	88,86,726
1905-06	..	..	..	89,55,395
1906-07	..	..	..	1,00,08,736
1907-08	..	..	..	1,09,57,142
1908-09	..	..	..	1,20,16,680
1909-10	..	..	..	1,18,36,518
1910-11	..	..	..	1,28,26,171
1911-12	..	..	..	1,35,90,408
1912-13	..	..	..	1,42,46,317
1913-14	..	..	..	1,51,28,485
1914-15	..	..	..	1,44,50,743
1915-16	..	..	..	1,59,35,456

The above figures show that the income of the Port has been seriously affected by the war. The receipts for 1914-15, which included eight months of war, were less by Rs 6 7 lakhs than those for 1913 14 and as the result of this fall in ordinary receipts, it was decided by the Commissioners to impose with effect from 1st February, 1915, special war surcharges designed to compensate for the decrease in business. The result of these is shown in the income for 1915-16, which represents the highest point in the history of the Trust and which enabled the Commissioners to almost extinguish the loss incurred during the preceding year.

Various considerable improvements for the expansion of the port have in late years been carried out to provide for the growth of trade. An important project recently undertaken was one for the lighting of the lower reaches of the Hughli with a view to their navigation by night. Considerable progress has been made with a new scheme for the extension of the docks. A special committee was appointed in England in 1913, to visit and inspect British and Continental ports with a view to advising the Commissioner in the light of the latest experience there on various points connected with new works.

But these undertakings only belong to the outskirts of the main problem. The remedial measures of the Port Trust have proved beneficial, but they are insufficient to meet the ever-increasing requirements of trade. The question of the congestion at the Calcutta jetties and the absence of adequate transport facilities for the present volume of trade, has been engaging the attention of Government for some considerable time past. There has been a very great expansion of the trade of the port and a large increase in the number and tonnage of vessels entering it, and the lack of sufficient accommodation has resulted in serious delays to vessels and consequent loss, chiefly arising from the inadequacy of facilities for the discharge of cargo at the jetties.

The Government of Bengal, in December 1913, appointed a Committee to investigate the important questions represented by the problem of the future development of the port. The Committee consisted of the Hon. Sir William Duke, Chairman; Sir Henry Burt, the Hon. Mr. A. M. Monteth, the Hon. Mr. J. C. Shorrocks, the Hon. Raja Hrishikesh Leka, Mr. A. G. Lyster, and Mr. H. F. Howard, members and Mr. E. N. Reid, I.C.S., Secretary.

The Committee was empowered to—

- (1) examine the existing traffic and port facilities in Calcutta and its immediate neighbourhood;
- (2) investigate the present and future requirements of the trade of Calcutta, and
- (3) determine the extent to which the various transport agencies shall provide new works and other facilities in order that these requirements may be fully met for as long a period as it is reasonable to prepare a forecast.

The Bengal Government, in an explanatory announcement, agreed "that the subject for consideration is one of wider range than an enquiry into the facilities afforded to the import trade at the jetties, and that it concerns rather the question whether proper facilities of all kinds are being provided to enable the port and railway authorities to deal promptly and adequately with the rapidly-expanding trade of Calcutta in accordance with a well-defined and carefully-thought-out policy. There are several projects for improving transport facilities and the railway and other approaches to the port, which have been prepared at various times and which are now under consideration, such as the provision of railway bridge over the Hughli at Panihati, the expansion of the docks, the provision of new coaling berths on the Howrah side of the Hughli, the Grand Trunk Canal Project, the removal of the Hatkhola jute mart and additions to the jetties. These projects are of the first importance and involve enormous expenditure and they should, it is rightly held, be examined and co-ordinated by a committee whose duty it would be to make an exhaustive enquiry into the requirements of the trade of the port and the means by which these requirements could be met."

The Committee's report was published in March, 1914. It approved of the new scheme already undertaken by the Port Commissioners for the extension of the Docks, saying "we are of opinion that the general layout of the scheme is suitable, and that it will ensure an ample margin for the expansion of trade which is likely to take place in any period that can reasonably be foreseen." The Committee said that "the main criticism to which the conduct of the Port affairs is open is that the inception of these schemes was delayed until the great increase of trade during the last two years has showed only too conclusively how urgently they were required."

At the same time, the Committee recognised the eminent services rendered to the Port by the late Sir Frederick Dumayne, during his tenure of office as Vice-Chairman of the Port Commissioners, stating that the schemes or extension recommended were initiated under his auspices and that their inception is now possible is due to his foresight and to his grasp of the situation.

The Committee considered that the future expansion of the seaborne trade of Calcutta should take place in the neighbourhood of the docks. Their principal conclusions, in addition to their approval of the dock extension scheme, may be summarised as follows. A standing advisory Committee should be appointed in reference to the railway approaches and lay-out of the siding accommodation for the new dock system

the Committee to consist of the traffic officers of the Port Trust and of the railways concerned. It would be unwise to incur a large outlay in developing the present jetties, but steps should be taken to mitigate the existing defects in regard to them without undue expenditure on schemes that will not be permanently useful. The whole question of the improvement of the river Hughli should be thoroughly investigated and decided on at an early date. The present site of the Howrah bridge should be adopted for the proposed new bridge, which should be wide enough to allow of three streams of traffic in each direction, in addition to the trams, and should carry greatly widened footways. The Improvement Trust should consider the whole question of road communication in connection with the prospective development scheme of the Port Commissioners. The opening of a second railway bridge over the Hughli will be required eight years hence. The Committee recommended various measures to enable the revenues of the Port Trust to meet the charges on the large capital works contemplated.

The outbreak of the war, by imposing difficulties in the raising of loans on such terms as were previously possible, has necessitated the postponement of the extensive schemes for a new Dock system with connected shunting yards and other improvements, which had been projected as the result of the Committee's investigations. The first portion of the Commissioners' extension scheme, namely, the provision at Garden Reach of five additional riverside berths, one intended for coal and the other four for general import and export trade, has, however, been proceeded with, though the difficulties

of obtaining material have necessarily deferred the dates of completion. The first of these berths to be finished, namely, the Coaling Berth was handed over for traffic in June, 1916, and it was hoped that the first General Berth would be completed by the end of the calendar year. As regards the new Dock system, progress has been confined to the preparation of a complete scheme for the lock entrance, the details of which were prepared by the Commissioners' Chief Engineer, Mr. John Scott, and were then referred to a small Committee in London consisting of Sir John Wolfe Barry and Mr. Cartwright Reid, whose report on the proposals has been received and considered. The final plans are now being matured in general accordance with the recommendations of these Consultants and during the present financial year it is hoped to sink three trial wells which will afford information as to the conditions to be met. The initiation of the work of constructing the whole entrance will be taken in hand as soon as financial conditions permit and, at the same time, the construction of a small number, probably three or four, additional berths within the new Docks will be taken in hand. It is hoped that progress with the connected railway arrangements and road diversion schemes will be carried out *pari passu*.

The construction of a new opening bridge across the Hooghly has also been deferred on financial grounds, but the plans are being matured with a view to construction being undertaken as soon as possible.

The Capital debt of the Port at the end of last financial year was Rs. 10½ lakhs, while the total assets amounted to over Rs. 14 lakhs.

## BOMBAY.

The Board of Trustees of the Port of Bombay is constituted of 17 members, as follows:—

*Appointed by Government.*—Sir Frederick L. Sprott, Kt. (Chairman), Mr. Mahomedbhoy Currimbhoy Ebrahim (Messrs. Currimbhoy Ebrahim & Co.), the Director of the Royal Indian Marine, Major H. A. L. Hepper, R.E. (Agent, G. I. P. Ry.), Mr. R. F. L. Whitty, I.O.S. (Collector of Customs, Bombay), the Hon'ble Mr. Purashotandas Thakurdas (Messrs. Narandas, Rajaram & Co.), Mr. R. Woolcombe (Agent, B. B. & C. I. Ry.), Mr. P. W. Monie, I.O.S. (Municipal Commissioner, Bombay), Brigadier General W. C. Knight, C.B., D.S.O., A.D.C. (Military Officer serving with Bombay Brigade) and the Hon. Mr. Phiroze C. Setlwa.

*Elected by the Chamber of Commerce.*—Mr. A. H. Froom (P. & O. S. N. Co.) the Hon'ble Mr. T. W. Birkett (Messrs. Killick, Nixon & Co.), Mr. Nigel F. Paton (Messrs. W. & A. Graham & Co.) the Hon. Mr. J. S. Wardlaw Milne (Turner, Morrison & Co.) and the Hon. Mr. M. N. Hogg (Forbes, Forbes, Campbell & Co.).

*Elected by the Indian Merchants' Chamber and Bureau.*—The Hon'ble Mr. Manmohandas Ramji (Messrs. Manmohandas Ramji & Co.).

*Elected by the Grain Merchants' Association.*—Mr. Naranji Haribhai (Messrs. Ramji Purshottam & Co.).

The following are the principal officers of the Trust:—

*Secretary.*—Mr. H. E. Hart (on leave).  
*Chief Accountant (Acting Secretary).*—Mr. J. Tyers

*Acting Chief Accountant.*—Mr. W. R. S. Sharpe.

*Engineers.*—Messrs. P. G. Messent, C.I.E., M. INST. C.E. (Chief Engineer), Mr. A. C. W. Fosbery, M. INST. C.E. (Deputy Chief Engineer), L. H. Savile, A.M. INST. C.E. (Deputy Chief Engineer, New Docks Works).

*Port Officer.*—Commander C. S. Hickman, D.S.O., R.I.M.

The revenue of the Trust in 1915-16 amounted to Rs. 1,31,33,761. This was Rs. 16,90,525 in excess of the estimate and is the highest on record in the history of the port, and in excess of the previous highest figure, that for 1914-15 by Rs. 28,60,560. The expenditure from revenue was Rs. 1,38,64,053, and after making allowance for payment of special expenditure from special receipts the year's net deficit was Rs. 2,83,344, against a budgeted deficit of Rs. 16,92,368. This deficit has been met by withdrawal from the Revenue Reserve Fund specially accumulated to meet the temporary deficits anticipated during the first few years following the opening of the new docks and the Port Trust Railway. The excess

of actual revenue collections over estimates was mainly due to increased dock receipts owing to a partial revival of the ordinary import and export trade of the port—a feature of which was the expansion of the import trade with Japan—and to the large volume of Government traffic dealt with at the docks. On capital account the expenditure during the year aggregated Rs. 77,49,230, of which Rs. 66,89,325 was spent upon new large works—Alexandra Wet Dock and Hughes' Dry Dock and the Mazagaon-Sewri port extension reclamation, including the Port Trust Railway. The total debt of the Trust at the end of the year amounted to Rs. 14,78,65,747.

The total trade of Bombay port during the last official year was Rs. 140½ crores, a decrease compared with the previous year of about Rs. 8½ crores (exclusive of Government transactions) or approximately 6 per cent. The number of steam and square rigged vessels which entered the docks or were berthed at the harbour walls and paid dues, excluding those which remained for unloading and loading in the harbour stream during recent years, including last year, is shown by the following statement:—

Year.	Number.	Tonnage
1906-07 .. ..	1476	2,690,406
1907-08 .. ..	1477	2,678,345
1908-09 .. ..	1474	2,633,303
1909-10 .. ..	1611	2,747,779
1910-11 .. ..	1589	2,866,623
1911-12 .. ..	1519	2,767,913
1912-13 .. ..	1566	2,926,506
1913-14 .. ..	1579	3,135,597
1914-15 .. ..	1880	4,417,035
1915-16 .. ..	1794	3,939,721

### Bombay Port Extension.

The Bombay Port Trust have partially completed important new development schemes, which will add greatly to the facilities of the port. Foremost amongst these works comes the Alexandra Dock, the equipment of which will have no superior in the world.

The starting point of the modern port of Bombay was the year 1862, when the Elphinstone Land and Press Company, which had already done useful development work, entered into a contract with Government to provide a hundred acres for the terminus of the Great Indian Peninsula Railway, receiving in return the right to reclaim from the sea for its own advantage two hundred and fifty acres fronting the properties it had already acquired. The Company brought its estate into bearing with rare enterprise.

Doubts were felt subsequently of the wisdom of conferring upon a private corporation such an enormous monopoly as the control of the harbour front. These were resolved in 1869 by the decision to buy out the company and vest its properties in a public trust. The estate passed into the possession of the Government in 1869, the purchase price being ap-

proximately two millions sterling, and after being managed by a department of Government in the interim, the property passed to the newly-constituted Port Trust in June, 1878.

Government purchased in 1879, on behalf of the Trust, the private foreshore owners' rights, at a cost of Rs. 75 lakhs, and at the same time reconstituted the Trust on a basis on which it has worked exceedingly well until the present day. The late King Emperor Edward VII, during his visit to Bombay in 1905, laid the foundation stone of the first large dock, which has since been known as Prince's Dock. This was opened in 1880, and thenceforward the financial difficulties hitherto experienced by the Port Trust disappeared. The construction of the Victoria Dock followed and recent years have provided an unbroken succession of surplus receipts into the treasury of the Port. Out of these profits charges on trade have been reduced wherever they pressed and the financial position of the Trust has greatly been strengthened by the building up of a large revenue, by the institution of sinking funds for the repayment of the whole of the existing debt and by liberal appropriations to depreciation accounts.

The trade of the port rapidly outgrew the accommodation provided at Prince's and Victoria Docks. The developments now in progress are the result and are estimated to provide for the requirements of the Port for another 20 years, or longer. The new schemes may be divided into four heads:

(a) The construction of the Alexandra Wet Dock and Hughes Dry Dock, of which His Majesty The King Emperor laid the foundation stone during his visit to Bombay as Prince of Wales in 1905. His Excellency the Viceroy, with Her Excellency Lady Hardinge, performed the opening ceremony in March, 1914.

(b) The reclamation for the development of Port facilities of 583 acres, with a wharf frontage 2½ miles in length—an addition of some 4½ per cent. to the area of the city—at Mazagaon and Sewri, beyond the present Docks at the extreme north of the harbour. The masonry walling round the reclamation and the filling behind the walls was entirely completed during 1915-16 and good progress has been made with surfacing this large area.

(c) The building of a new railway leading from the main lines of the G. I. P. and B. B. & C. I., outside the city, to the Docks, in order to provide for more expeditious handling of heavy railborne traffic. Part of the new Port Trust Railway was opened for traffic on 1st January, 1915, and the main system was practically completed in the next year.

(d) The construction of a complete bulk oil installation at Sewri, at the north of the docks, with a deep-water pier.

The total estimated cost of the new dock and its equipment is Rs. 6,15,05,469 or, say, £4,100,365; cost of the Port Trust Railway over 123 lakhs (£820,000); of the bulk oil installation, 22½ lakhs (£147,500); and of the reclamation and contingent works, Rs. 388 lakhs, or, say, £2,586,666.



The contract for the Alexandra Dock was given to Messrs. Price, Wills & Reeves in 1903. The dock is oblong in shape, with two bays at the north end. The total area of the wet basin is 49.52 acres, the length of quays, including the harbour wall, nearly three miles. There are 17 berths 500 ft. in length. These berths are equipped with hydraulic cranes and transit shed accommodation varying from 3-storied sheds 400 ft. long by 120 ft. wide, to single storied sheds 400 ft. long by 100 ft. wide. Railway sidings run between the quays and the sheds, also behind the sheds. On the harbour wall there is a quay 3,000 ft. long, equipped with hydraulic cranes and transit sheds. The north end of this quay is intended for a trooping berth. Hydraulic power is used for working the cranes, dock gates, machinery, transit shed lifts, capstans, etc. The dock entrance is through a lock on the south-west, parallel to which runs the new dry dock, a thousand feet long, a hundred feet wide, and with a sill thirty-three and a quarter feet below high water ordinary neap tides.

Outside the dock, beyond the entrance lock, runs the new mole, a continuation of the south-west wall, alongside which ocean steamers may embark and disembark their passengers direct from the shore, thus dispensing with the tiresome interposition of the tender. In the immediate vicinity of the landing pier, a Customs house, refreshment and waiting rooms, post and telegraph offices and every facility the traveller can require are under construction. A reclamation of 9 acres incidental to the new dock works has been opened between the Dock and Ballard Pier. Sites thereon are to be let on 99-year lease, for Offices and 1st class

residences and, on certain conditions, large shops and hotels.

The small Carnac basin, immediately north of the new dock and formerly used by country craft, has been filled in, so as to enable a canal to be cut from the northern extremity of Alexandra Dock, and extending to Victoria Dock. The width of the canal will be 80 ft. Four berths will be provided to permit ships to lie at the wharves on either bank. The waterway will enable ships to be taken into any part of the Bombay dock area through the Alexandra Dock entrance. This will probably lead to the closing of the old dock entrances, with the result that ships will be saved much intricate handling and the Port Trust will be relieved of the necessity of expensive dredging operations.

The railway sidings and series of transit sheds in the new dock were planned according to the most modern principles of dock management.

The Sewri reclamation will chiefly be utilised for the accommodation of the export trade of cotton, grain and seeds, which form the largest item in the traffic of the port. The old cotton green—or market—is situated at Colaba, at the extreme southern end of the port and has long been greatly overcrowded, besides encumbering that end of the port. The new cotton green and godowns on the reclamation will cover about 166 acres, with 182½ acres available for future extension. The present greens and godowns at Colaba occupy 50 acres. Unloading sidings with accommodation for 700 wagons are to be provided, in addition to ample running lines, as compared with sidings to hold 154 wagons at Colaba at present.

## KARACHI.

The members of the Board of Trustees of the Port of Karachi are as follows—

*Chairman*—Mr. H. C. Mules, C.S.I., M.V.O.

*Appointed by Government*.—The Hon'ble Mr. W. C. Nicholas (Vice-Chairman), (Anderson & Co.), Mr. F. S. Punnett (Chief Collector of Customs in Sind), Mr. D. B. Trevor (District Traffic Superintendent, Karachi Port, North-Western Railway), Major A. B. Merriman (General Staff Officer Karachi Brigade), Mr. T. J. Stephen (The National Bank of India, Ltd.), Mr. Gidumal Lekhra (representative Indian Merchant).

*Elected by the Chamber of Commerce*.—Mr. E. A. Pearson (Forbes, Forbes Campbell & Co., Ltd.), Mr. P. H. Browne (Mackinnon Mackenzie & Co.) on leave, Mr. J. I. Murray (acting), (Ewart Ryrie & Co.), Mr. S. C. Woodward (Clement, Robson & Co.).

*Elected by the Municipality*.—The Hon'ble Mr. Harchandral Vishandas, B.A. LL.B. (President, Karachi Municipality).

The principal officers of the Trust are:—

*Port Officer*.—Commander M. W. Farewell, C.I.E., R.I.M.

*Secretary*.—(vacant) Mr. T. S. Downie (acting).

*Chief Engineer*.—Mr. W. H. Neilson, B.A., B.A.L., B.Sc., M.I.C.E.

*Superintendent Export and Import*.—Mr. T. S. Downie (on deputation, Mr. A. A. L. Flynn (acting)).

The revenue receipts and expenditure of Karachi Port for the year 1915-16 whereas under—

Revenue receipts (excluding expenditure from Port Fund Account), Rs. 32,70,323; Expenditure, Rs. 37,45,616; Deficit, Rs. 4,75,293 (met from opening balance); Reserve Fund, forty lakhs (face value).

The revenue receipts in 1914-15 were Rs. 33,49,714. The capital debt of the port, at the close of the last financial year, amounted to Rs. 2,61,21,949.

The number of vessels entering the port in the year 1915-16 was 3,740 with a tonnage of 1,957,467½ tons against 3,076 with a tonnage of 1,933,154½ tons in 1914-15. This is exclusive of vessels put back and fishing boats. The number of steamers which entered the port was 912 against 852 in the previous year. The tonnage of steamers entering the port was 1,811,383 compared with 1,823,937 in the previous year.

Imports landed during the year amounted to 390,979 tons against 697,958 in the previous year. Total shipments were 1,296,268 tons in 1915-16 against 1,015,863 tons in 1914-15.

The close of the year 1912-13 marked the practical completion of harbour and port development works, the result of which will be a new departure in the history of the Trust. But the original scheme continued to pass through a process of expansion and these extensions of the works were practically finished by the end of 1915-16. On the last day of the year Mr. G. R. Lynn, M.I.C.E., resigned his post as Chief Engineer to the Port Trust, at the age of 66 years.

Plans and estimates were in 1915 submitted to and approved by Government for a West Wharfrage Scheme to provide 16 new berths, the cost being estimated at Rs. 5,43,77,990, though the Trust anticipate that these estimates "will have to be thoroughly revised." Some Rs. 17 lakhs were spent on the scheme up to the end of 1915, and for the present it is proposed to carry out a portion of the scheme

only, viz., for 6 berths, at an estimated cost of over Rs. 1,48,00,000. Much dredging and the construction of a protecting bank as the sea face of the new wharf and of a clay bund along the west side of the area to be reclaimed were completed last year. Government also sanctioned in 1915 plans and estimates for a Lower Harbour Improvement Scheme, costing Rs. 25,25,000, which is a corollary to the other improvements. Under this scheme, the entrance channel will be deepened to a depth of 32 ft. 6 in. at L. W. O. S. T. This will enable any ship that can pass through the Suez Canal to enter the harbour and take up a berth at the lowest state of the tide. The sanctioned draught for the Suez Canal is now 29 feet, but 32 feet are being worked up to and it is understood that this will not be the extreme limit. Nothing was done in connection with this scheme last year, nor does there appear any likelihood of a commencement with it for some time.

## MADRAS.

The following gentlemen are the Trustees of the Port of Madras—

**Officials.**—The Hon'ble Sir Francis J. E. Spring, K.C.I.E. (Chairman), Mr. C. W. E. Cotton, I.C.S. (Collector of Customs), Commander C. W. Shearme, R.I.M., the Presidency Port Officer, and Mr. J. M. Lacey, A.M.I.C.E.

**Non-Officials.**—Khan Bahadur Muhammad Abdul Kuddas Badsha Sahib, M. R. Ry. Rao Bahadur P. Theagaraya Chetti Garu, B.A., M. R. Ry. Rao Sahib C. Ramanujam Chetti Garu, M. R. Ry. C. Gopal Menon Avergal.

**Representing Chamber of Commerce.**—The Hon'ble Mr. G. Fraser, Mr. J. F. Simpson, Mr. A. P. Symonds, Mr. H. P. M. Rac, Mr. R. Todd, Mr. A. Mulrhead, C.I.E.

**Trades Association.**—Mr. J. H. Thongar.

The receipts of the Trust from all sources of revenue during the financial year 1915-16 were Rs. 11,66,697 against Rs. 12,57,230 in 1914-15. This represents a decrease of 7.20 per cent. The gross expenditure out of revenue not counting contributions made by revenue to capital or re-payment of debt was Rs. 10,49,066 or the equivalent of Rs. 89.92 per cent. of the gross receipts. The corresponding percentage for 1914-15 was 75.26 and the average for the past 28 years 70.77. Excluding from working expenses the interest on loans, which in the year under review was Rs. 4,56,273 actual working expenses came to 50.81 per cent. of the regular harbour earnings, against 44.44 per cent. in 1914-15. Vessels of all sorts to the number of 380 and a tonnage of 1,075,348 paid port dues, the previous year's figures being 435 and 1,225,464 respectively and about 572,732 tons of exports and imports were dealt with at the port.

Constant improvements of the port are in progress to meet the increasing demands of

trade. The Trust recently launched out into a policy of borrowings in order to enable the entire 200 acres within the enclosed harbour to be deepened from 23 to 32 feet below low water, with quay extensions. The Government of India sanctioned a loan of Rs. 50 lakhs for this purpose. The work has been vigorously proceeded with. Good progress was made last year with the new quay on the Western side of the harbour. This quay, when completed, will be 3,000 feet long. Two of the berths at it are new in use. There are now in the harbour five berths at which vessels drawing up to 28 feet of water can lie alongside quays. The first of the projected three large double storied merchant's warehouses, capable of storing 35,000 tons of produce, has been completed.

The new Port Trust office, a handsome stone-faced building occupying a central position on the harbour front has been completed and brought into use.

The Port Trust's debt at the end of the official year was Rs. 1,08,73,066.

The harbour was attacked by the German cruiser *Imden* on the night of the 22nd September 1914. She fired about 50 high explosive shells at the oil tanks, setting two of them on fire and doing considerable damage to the Port Trust buildings in the fire zone, besides hitting the B.I.S.S. Chupra. Fortunately the loss of life was small, three men. The harbour buildings damaged by shell fire were repaired at a cost of Rs. 6,520. Two partially filled tanks belonging to the Burmah Oil Company were completely destroyed and their tinning factory and other buildings were damaged; the loss has been stated by the Chairman of the Company, at a meeting of his shareholders, to have amounted to £7,812.

## RANGOON.

The personnel of the Commissioners for the port of Rangoon is comprised of the following thirteen members:—

*Appointed by Government.*—Sir George C. Buchanan, C.I.E., M. INST., C.E., (Chairman, on deputation), Mr. J. L. Holmes, M. INST., C.E. (Chairman, *sub pro tem*), Mr. J. A. Stevens, (Chief Collector of Customs, Burma), Mr. W. H. Tarleton, (Commissioner of Police, Rangoon), Commander S. D. Vale, R.I.M. (Principal Port Officer, Burma), Mr. W. H. L. Cabell, B.A., I.C.S. (President, Rangoon Municipality), the Hon'ble Mr. W. Macdonald, Mr. J. W. A. Bell, and Mr. H. B. Huddleston (Vice-Chairman).

*Elected by the Burma Chamber of Commerce.*—Messrs. J. C. Mackendrik, D. Robertson, W. Buchanan, and J. Scott.

*Elected by the Rangoon Trades Association.* Mr. W. M. Turner.

Officers of the Trust are —

*Secretary.*—Mr. I. Cowling (on leave); Mr. H. Leonard (officiating).

*Resident Engr.*—Mr. W. Lindley (officiating).

*Executive Engineer (River Conservancy).*—Mr. E. C. Niven, A.M. INST. C.E. (on deputation); Mr. W. Lindley (officiating).

*Deputy Conservator.*—Mr. H. G. G. Ashton (on leave); Mr. G. Cardno (officiating).

*Traffic Manager.*—Mr. E. H. Keeling (on leave); Mr. J. H. Primrose Wells (officiating).

*Chief Accountant.*—Mr. D. H. James.

*Port Health Department.*—Dr. F. A. Foy, M.B. C.M., D.P.H., Port Health Officer.

The receipts and expenditure on revenue account of the port of Rangoon in 1915-16 were as follow:—

Receipts .. ..	Rs. 45,37,680
Expenditure .. ..	41,09,977

The capital debt of the port fund at the end of the year was Rs. 2,98,62,000. Securities (at cost) of Rs. 44,43,354 are held at the credit of the Sinking Fund.

The total value of the trade of the port during the year was Rs. 4,689 00 lakhs, as compared with Rs. 4,739 45 lakhs in the preceding year.

## CHITTAGONG.

Chittagong, in Eastern Bengal, on the right bank of the Karnaphuli river 12 miles from its mouth, was already an important place of trade in the sixteenth century, when the Portuguese merchants gave it the name of Porto Grando. The construction of the Assam Bengal Railway has made it the natural outlet for the trade of Assam and part of Eastern Bengal. The chief business is the export of jute, which is baled at Narayanganj and either shipped thence by steamer to Chandpur and railed to Chittagong or dispatched direct in brigs to that port. Pileocoods, salt and kerosene oil are imported, and rice, tea and hides are the principal exports. The total value of the exports in 1913-14 was £3,232,463 and the total value of the imports in the same year was £28,591.

It has been recommended that this port may be made over to the Assam-Bengal Railway and that funds required for its improvement should be provided by the Government of India out of their railway budgets. This proposal has the support of the Bengal Government and a report on the matter has been

The total imports (landed or sent inland in river craft) from sea-going vessels amounted to 1,041,776 tons. Goods landed from vessels arriving from European ports and other ports outside Asia declined by 26 per cent., but from Asiatic ports they increased by 9 per cent. The traffic at the jetties for inland vessels totalled 1,195,745 tons. The total number of steamers (excluding Government vessels) entering the port was 1,091 with a total net registered tonnage of 2,173,539, being 140 steamers and 241,571 tons below the previous year.

There took place on the 17th February, 1914, the inauguration of the recently completed river training works, rendered necessary by the erosion of the right bank of the Rangoon river above the town to such extent as to threaten the permanent diversion of the main stream from the Rangoon foreshore and the consequent formation of a sandbank in front of the whole of the port frontage. The works comprised a training wall 10,000 ft. long and the dredging of a channel through the shoal in front of the wall. It is calculated that 99½ per cent. of the river is brought under control. One and a half million tons of granite were used in the work. The wall was practically completed one year and nine months before the estimated time. The object of the work has successfully been accomplished, the main channel of the river has been diverted into its new course and the erosion of the right bank has ceased. The revised estimate for the complete work is Rs. 138 lakhs, against the sanctioned estimate of Rs. 150 lakhs. The cost is borne by a free grant of Rs. 50 lakhs from the Government of India and by the raising of port debenture loans. The work being non-revenue-producing, imposes a burden of some Rs. 5½ lakhs on the trade of the port.

Sir George Buchanan, in December 1915, proceeded to Basra, to advise the Government of India as to improvements at the mouth of the Shatt-el-Arab and elsewhere in that region. He is still engaged there.

submitted to the Secretary of State. The Acting Agent of the Assam-Bengal Railway points out in this report that, however valuable the Port of Chittagong might be to the Assam-Bengal Railway it should only be after the most careful consideration that the sum of over a crore of rupees already spent upon this port should be added to the Assam-Bengal Railway capital, since to do so would mean the further putting back of the prospect of this railway's paying dividend. He urges therefore, that the Government of India should take upon itself the whole of the responsibility for the expenditure required, which, he thinks might rightly be done in view of the increasing value to Government to be derived from improving the port. The procedure, he suggests, is that the capital of the Port, together with the capital cost of the railway terminal facilities should be included in a separate account and not in that of the Assam-Bengal Railway and that this should be financed in the same way as are branch line companies.

## VIZAGAPATAM HARBOUR PROJECT.

The question of the creation of a harbour at Vizagapatam, to supply an outlet for a large area of fertile country hitherto undeveloped and without suitable access to the outside world, has been lately brought to the fore through a report to the Bengal-Nagpur Railway Company by their consulting engineers, Sir John Wolfe Barry and partners. This report, which was based on personal inspection, upholds the practicability of creating, at no very extravagant cost, an inland harbour to which access would be maintained by two breakwaters projecting into the sea, and by dredging a channel to the depth (in the first instance) of 24 feet. A deep-water quay would be provided, 1,500 feet in length, with a possibility of supplying further accommodation in the future. It is understood that the question is meeting with sympathetic consideration on the part of the Indian Government, though some doubt seems to exist as to the best measures for the furtherance of the object in view. That the creation of such a port would have a beneficial influence on the development of a large area in East Central India seems unquestioned. It is pointed out that Vizagapatam, lying as it does in front

of the only practicable gap in the barrier of the Eastern Ghats, is formed by nature to be the outlet of the Central Provinces, from which a considerable amount of trade has taken this route in the past, even with the imperfect communications hitherto available. A necessary complement of the scheme would be the construction of the proposed railway by Parvapuram to Raipur, which with the existing coast line of the Bengal Nagpur Railway, would make a large and rich area tributary to the proposed port, and obviate the long and expensive circuit by Calcutta. A link would also be supplied in the most direct route to Rangoon from Europe by way of Bombay, while from an imperial point of view the possible provision of a fortified port on the long and almost unprotected stretch of coast between Colombo and Calcutta is held to be a consideration of great importance. The lofty projecting headland of the Dolphin's Nose would, it is pointed out, offer facilities for this purpose, and it also plays an important part in throwing the strong southerly current out to sea and checking the formation of a bar at Vizagapatam.

## BOY SCOUTS.

The Boy Scouts movement, initiated in England by Lt.-Gen. Sir Robert Baden Powell (the Chief Scout), has spread widely in India, and the Boy Scouts Association has received the patronage of the Viceroy and the heads of the local governments. The aim of the Association is to develop good citizenship among boys by forming their character—training them in habits of observation, obedience and self-reliance—inculcating loyalty and thoughtfulness for others—and teaching them services useful to the public and handicrafts useful to themselves.

The following division of duties of the Indian Headquarters is officially published for information:—*The Assistant Chief Commissioner* deals with all matters of organisation and Discipline, including the issue of Warrants to new local Associations and Officers, also the registration of new troops, which should be applied for on Form C, obtainable from the General Secretary. Recommendations for awards of Life Saving Medals and Certificates should be made to him and also all applications for exemption from the swimming test for 1st class (Regulation 21) and all correspondence on the subject of Challenge Trophies. Owing to the war the movement in India has suffered considerable dislocation and embarrassment. Fifteen new associations were formed during 1914-15 but six others are temporarily in suspension. The latest annual report gives the following details of a census of Boy Scouts Associations in India:—Local Associations, 43. Troops, 99. Scout Masters, 90. Assistant Scout Masters, 26. Scouts, 2,161. Wolf Cubs, 180. Grand Total, 2,457.

*The General Secretary* deals with routine matters, official publications, sale of badges, and also all matters connected with the official publication, *The Boy Scouts Gazette of India*. Local Secretaries can communicate with him direct on these matters and it is not necessary to refer to the Commissioners on such subjects.

*The Boy Scouts Gazette of India* published monthly, is the official organ of the Movement in India and in it are notified all official notices and orders issued by the Indian Headquarters. It is obtainable from the General Secretary. Subscription Rs. 2-8-0 per annum.

### HEADQUARTERS STAFF IN INDIA

*Chief Commissioner*—Major-General E. S. May, C.B., C.M.G., Lucknow.

*Deputy Chief Commissioner*—Lieut.-General Sir W. K. Birdwood, K.C.S.I., K.C.M.G., C.B., C.I.E., D.S.O. *On Service*.

*Offg. Deputy Chief Commissioner*—Major-General R. Wapshare, C.P., Poona.

*Commissioner for Sea Scouts*—Captain W. Lumsden, C.V.O., A.D.C., R.N., Director, Royal Indian Marine, Bombay.

*Deputy Commissioner for Sea Scouts*—Commander E. A. Constable, A.D.C., R.N., Commandant, Calcutta Port Defence Volunteers.

*Assistant Chief Commissioner*—Captain W. P. Pakenham-Walsh, R.E., Poona.

*Hon. General Secretary*—Captain A. G. Potter, A.D.C., Dilkhusha, Lucknow.

*Hon. Treasurer*—E. F. Savi, Esq., Alliance Bank of Simla, Calcutta.

*Bankers*.—The Alliance Bank of Simla, Calcutta,

## Famine.

Famine in India is the inevitable accompaniment of economic conditions which leave the bulk of the people dependent on the soil for their means of livelihood. It is intensified, because the produce of the soil over the greater part of India is independent on a short rainy season, and the rains are erratic and subject to violent fluctuations. It falls with exceptional severity on India because the soil is divided into a multitude of petty holdings, tilled by people without any capital, living for the most part from hand to mouth, and amongst whom credit ceases to exist as soon as the rains fail. In other agricultural countries there are good seasons and bad; but there is none other, with the possible exception of China, where in a famine year millions of acres may not yield so much as a blade of grass, except under artificial irrigation. The conclusion to be drawn from these conditions is that for many years to come India must be susceptible to famine. The shock of famine may be mitigated by the spread of railways, by the development of irrigation, the growth of manufacturing industry and the improvement of rural credit. There is evidence that all these forces are tending greatly to reduce the social and economic disturbance caused by a failure of the rains. But they cannot entirely remove it.

### Famine Under Native Rule.

At one time there was a general tendency to attribute famine in India entirely to the effect of British rule. In the golden age of India, we were told—whenever it may have been—famine was unknown. But India had been drained of its resources of food by the railways, the people had been impoverished by the land revenue demand and the country as a whole had been rendered less capable of meeting a failure of rains by the "Drain" caused by the Home Charges (*q.v.*). These fallacies have disappeared under the inexorable logic of facts. A better knowledge of Indian history has shown that famines were frequent under Native rule, and frightful when they came. "In 1630," says Sir William Hunter, in the History of British India, "a calamity fell upon Gujarat which enables us to realise the terrible meaning of the word famine in India under Native rule. Whole cities and districts were left bare of inhabitants." In 1631 a Dutch merchant reported that only eleven of the 260 families at Swally survived. He found the road thence to Surat covered with bodies decaying on the highway where they died, there being none to bury them. In Surat, that great and crowded city, he could hardly see any living persons; but "the corpses at the corner of the streets lie twenty together, nobody burying them. Thirty thousand had perished in the town alone. Pestilence followed famine." Further historical evidence was adduced by Sir Theodore Morrison in his volume on the Economic Transition of India. The "Drain" theory has been exploded. It has come to be seen that whilst railways have checked the old-fashioned practice of storing grain in the villages they have made the reserves, where

they exist, available for the whole of India. In India there is now no such a thing as a food famine; the country always produces enough food for the whole of the population; famine when it comes is a money famine and the task of the State is confined to providing the means for those affected by drought to earn enough to buy food. The machinery whereby this is done will be examined after we have seen the experiences through which it was evolved.

### History of Recent Famines.

The Orissa famine of 1865-67 may be taken as the starting point because that induced to first great and organised effort to combat distress through State agency. It affected 180,000 square miles and 47,500,000 people. The Bengal Government was a little slow in appreciating the need for action, but later food was poured into the district in prodigious quantities. Thirty-five million units were relieved (a unit is one person supported for one day) at a cost 95 lakhs. The mortality was very heavy, and it is estimated that a million people, or one-third of the population, died in Orissa alone. This was followed by the Madras famine of 1866, and the famine in Western India of 1868-70. The latter famine introduced India to the great migration from Marwar which was such a distinguishing feature of the famine of 1899-1900: it is estimated that out of a total population of a million and a half in Marwar, one million emigrated. There was famine in Behar in 1873-74, then came the great south Indian Famine of 1876-78. This affected Madras, Mysore, Hyderabad and Bombay for two years and in the second year extended to parts of the Central and United Provinces and to a small tract in the Punjab. The total area affected was 257,000 square miles and the population 58,500,000. Warned by the excessive expenditure in Behar and actuated by the desire to secure economy the Government relief programme was not entirely successful. The excess mortality in this famine is said to have been 5,250,000 in British territory alone. Throughout British India 700,000,000 units were relieved at a cost of Rs. 8½ crores. Charitable contributions from Great Britain and the Colonies aggregated Rs. 84 lakhs.

### The Famine Codes.

The experiences of this famine showed the necessity of placing relief on an organised basis. The first great Famine Commission which sat under the presidency of Sir Richard Starchey, elaborated the Famine Codes, which amended to meet later experience, form the basis of the famine relief system to-day. They recommended (1) that employment should be given on the relief works to the able-bodied, at a wage sufficient for support, on the condition of performing a suitable task; and (2) that gratuitous relief should be given in their villages or in poor houses to those who are unable to work. They recommended that the food supply should be left to private agency; except where that was unequal to the demands upon it. They advised that the land-owning classes should be assisted by loans, and by general suspensions of revenue in proportion to the crop failure. In sending a

Famine Code to the provincial governments, the Government of India laid down as the cardinal feature of their policy that the famine wage "is the lowest amount sufficient to maintain health under given circumstances. Whilst the duty of Government is to save life, it is not bound to maintain the labouring population at its normal level of comfort." Provincial codes were drawn up, and were tested by the famine of 1896-97. In that 307,000 square miles were affected, with a population of 69,500,000. The numbers relieved exceeded 4,000,000 at the time of greatest distress. The cost of famine relief was Rs. 7½ crores, revenue was remitted to the extent of Rs. 1½ crore, and loans given aggregating Rs. 1½ crore. The charitable relief fund amounted to about Rs. 1½ crore, of which Rs. 1½ crore was subscribed in the United Kingdom. The actual famine mortality in British India was estimated at 750,000. The experiences of this famine were examined by a Commission under Sir James Lyall, which reported that the success attained in saving life and the relief of distress was greater than had ever been recorded in famines, comparable with it in severity, and that the expense was moderate. But before the Local Governments had been given time to digest the proposals of this Commission, or the people to recover from the shock, the great famine of 1899-1900 supervened.

#### The Famine of 1899-1900.

This famine affected 475,000 square miles with a population of 59,500,000. In the Central Provinces, Berar, Bombay, Ajmer, and the Hissar district of the Punjab famine was acute: it was intense in Rajputana, Baroda, Central India, Hyderabad and Kathiawar. It was marked by several distinctive features. The rainfall over the whole of India was in extreme defect, being eleven inches below the mean. In several localities there was practically no rain. There was in consequence a great fodder famine, with a terrible mortality amongst the cattle. The water supply was deficient, and brought a crop of difficulties in its train. Then districts like Gujarat, where famine had been unknown for so many years that the locality was thought to be famine immune, were affected; the people here being softened by prosperity, clung to their villages, in the hope of saving their cattle, and came within the scope of the relief works when it was too late to save life. A very large area in the Native States was affected, and the Marwaris swept from their impoverished land right through Central India like a horde of locusts, leaving desolation in their train. For these reasons relief had to be given on an unprecedented scale. At the end of July 4,500,000 persons were supported by the State, Rs. 10 crores were spent on relief, and the total cost was estimated at Rs. 15 crores. The famine was also marked by a widespread acceptance by Native States of the duty hitherto shouldered by the Government of India alone—the supreme responsibility of saving human life. Aided by loans to the extent of Rs. 8½ crores, the Native States did a great deal to bring their administration into line with that in British India. Although actual deaths from starvation were insignificant, the extensive outbreaks of cholera, and the devastating epidemic of

malaria which followed the advent of the rains, induced a famine mortality of approximately a million. The experiences of this famine were collated by the Commission presided over by Sir Antony MacDonnell. This Commission reported that taking the famine period as a whole the relief given was excessive, and laid down certain modified lines. The cardinal feature of their policy was moral strategy. Pointing out that if the people were assisted at the start they would help themselves, whilst if their condition were allowed to deteriorate it proceeded on a declining scale, they placed in the forefront of their programme the necessity of "putting heart into the people." The machinery suggested for this purpose was the prompt and liberal distribution of tagal loans, the early suspension of revenue, and a policy of prudent boldness, starting from the preparation of a large and expansive plan of relief and secured by liberal preparations, constant vigilance, and a full enlistment of non-official help. The wage scale was revised; the minimum wage was abolished in the case of able-bodied workers; payments by results were recommended; and proposals were made for saving cattle.

#### Success of the new policy.

The effectiveness of this machinery was partly demonstrated during the three lean years which followed the great famine in the Bombay Presidency. But it received its most conspicuous demonstration when the rains failed in the United Provinces in 1907-08. Moral strategy was practised here on an unprecedented scale, tagal loans being granted with the greatest liberality. The effect of these measures was succinctly indicated by the Lieutenant-Governor of the United Provinces, Sir John Hewett, in a speech in summarising his administration prior to his departure in England in March 1912. He showed that in the autumn harvest of 1907 there was a shortage of 4 million tons of food grains and in the spring harvest a shortage of 3 million tons, giving a total of seven million tons, or the food supplies for the Province for nine months and an economic loss of £38 million pounds. The Government advanced £1½ million to cultivators for temporary purposes and large sums for wells and permanent irrigation. The whole of this sum was repaid except fifty-four thousand pounds remitted owing to a second bad season and twenty-five thousand pounds then outstanding. By common consent a great famine had never been met with less loss and suffering to the people, and two years later hardly a trace of it remained. In 1911 the rainfall failed over a considerable area in Gujarat in the Bombay Presidency and again in 1912 in the Ahmednagar District of the Bombay Deccan and both these partial failures demonstrated that the shock of famine is far less severe now, owing to the increased resourcefulness of the people, than it was so late as 1899. Still further evidence in the same direction was furnished when the rains failed over large areas in the United Provinces in 1913-14. This famine affected 17,000 square miles with a population of 5½ millions, whilst distress was grave in 80,000 square miles with a population of 14 millions.

Three points soon emerged from the year—the people showed greater resisting power owing to their improved economic condition; they met the emergency with wonderful courage and resource; and the application of the relief programme brought the numbers on public works within manageable proportions, and induced the speedy return of the people to their normal avocations when the advent of bountiful rains in 1914 enabled agricultural operations to be generally resumed.

The Government of India is now in possession of complete machinery to combat the effects of drought. In ordinary times Government is kept informed of the meteorological conditions and the state of the crops; programmes of suitable relief works are kept up to date, the country is mapped into relief circles, reserves of tools and plant are stocked. If the rains fail, policy is at once declared, non-officials are enlisted, revenue suspended and loans for agricultural purposes made. Test works are then opened, and if labour in considerable quantities is attracted, they are converted into relief works on Code principles. Poor houses are opened and gratuitous relief given to the infirm. On the advent of the rains the people are moved from the large works to small works near their villages, liberal advances are made to agriculturists for the purchase of plough, cattle and seed. When the principal autumn crop is ripe, the few remaining works are gradually closed and gratuitous relief ceases. All this time the medical staff is kept in readiness to deal with cholera, which so often accompanies famine, and malaria, which generally supervenes when the rains break. Recent experiences go to show that never again will the Government of India be compelled to distribute relief on the tremendous scale demanded in 1899-1900. The high prices of produce have given the cultivators considerable resources, the extension of irrigation has protected a larger area, and labour has become more mobile, utilising to the full the increasing industrialism of the country. For instance, in 1911 the rains in Gujarat failed completely, yet there was little demand for relief works, and the necessities of the cultivators were rather for fodder for their cattle than for money or food for themselves. Various schemes are now under consideration for the establishment of fodder reserves in the villages.

#### Famine Protection.

Side by side with the perfection of the machinery for the relief of famine has gone the development of famine protection. The Famine Commission of 1880 stated that the best, and often the only means of securing protection from the extreme effects of famine and drought, are railways and irrigation. These are of two classes, productive and protective. Productive works being estimated to yield profits which will pay interest and sinking fund charges are met from loans; protective works, which do not pay, directly from revenue. In order to guarantee that there should be continuous progress with protective works, the Famine Insurance Grant was instituted in 1876. It was decided to set apart from the general revenues Rs. 1½ crores annually, or one million sterling. The first charge on this

grant is famine relief, the second protective works, the third the avoidance of debt. The chain of protective railways is now practically complete. Great progress is being made with protective irrigation. Acting on the advice of the Irrigation Commission (qv) an elaborate programme of protective irrigation works is being constructed, particularly in the Bombay Deccan—the most famine susceptible district in India—and in the Central Provinces. When these are completed, the shock of drought will be immensely reduced.

#### The Indian Famine Trust.

Outside the Government programme there is always scope for private philanthropy, especially in the provision of clothes, help for the superior class poor who cannot accept Government aid, and in assisting in the rehabilitation of the cultivators when the rains break. At every great famine large sums have been subscribed, particularly in the United Kingdom, for this purpose, and in 1899-1900 the people of the United States gave generous help. With the idea of providing a permanent famine fund, the Maharaja of Jaipur gave in 1900 a sum of Rs. 16 lakhs, in Government securities, to be held in trust for the relief of the needy in time of famine. This Trust has now swollen to Rs. 28 lakhs, chiefly from gifts by the founder's family. It is vested in trustees drawn from all parts of India, and is freely used in an emergency. Substantial grants were given for the Bombay relief fund in 1911, and for the relief of the distress in Ahmednagar (Bombay Deccan) in 1912. The report of the Trust for 1915 states that no payment towards relief was made during the year.

During the course of the year the United Provinces Charitable Relief Fund, 1914, refunded a total sum of Rs. 41,897-11-3 out of the sum of Rs. 1,00,000 granted to them by the Trust for relief purposes during 1914. Of this Rs. 38,592 11-3 have been accounted for in 1915 and the balance, Rs. 3,305-0-0, having been received too late for inclusion in the accounts for 1915, has been accounted for in 1916.

The Honorary Secretary was authorized at the annual meeting to invest temporarily a portion of the current account in the Bank of Bengal and 3½ per cent. Government paper of the nominal value of Rs. 1,44,500 was accordingly purchased at a cost of Rs. 1,34,973-5-8.

The interest realised during the year was utilised partly towards the purchase of Government paper, and the balance was placed to the credit of the current account of the Trust.

The statement showing details of the assets of the Trust as at 31st December 1915 stated that the Endowment Fund invested in Government securities vested in the Treasurer of Charitable Endowments as in the previous year was Rs. 28,10,000; Government Securities representing assets temporarily invested stood in 1915 at Rs. 8,05,100. The sales during the year were nil leaving a balance at the close of the year of Rs. 8,05,100. This with cash in current account in the Bank of Bengal stood at Rs. 1,39,883 leaving a total available for expenditure of Rs. 9,44,983 and the total value of the Trust amounted to Rs. 37,54,983.

### The Cost of Famine.

The fruits of this policy are revealed in a return on the last serious famine which has occurred in India. In the United Provinces the failure of the 1913 monsoon, followed by poor and unseasonable cold weather rains, led to a widespread failure of crops affecting an area of 18,200 square miles and a population of 6 millions, but the prosperity of the preceding years had enabled the population to develop a far greater staying power than on previous occasions of famine, nor was the rise in food prices so marked. Government made loans to cultivators amounting to over £1,250,000, besides suspending land revenue and sanctioning remissions amounting to over £717,000. The necessity for direct measures of relief did not arise till December, which is considerably later than on previous occasions of famine. The cost of direct relief operations to Government, including provision of cattle-

fodder, was about £362,000, a far smaller figure than in the famine of 1907-08, although the estimated loss of food-grains was almost as great. The Public Works Department, the civil authorities, and district boards arranged for the carrying out of numerous projects with famine labour. These comprised construction of roads, tanks and irrigation works and the reclamation of ravine land—all works of undoubted utility. Gratuitous relief amounted to £80,600; it was given principally to persons incapable of working. A marked feature of the famine was the extreme scarcity of fodder, which was met chiefly by concession rates for the carriage of fodder on railways and the supply of hay from the forests. Much good work was done by non-official efforts, and a charitable fund was raised to the amount of £27,424. The total cost of the famine to Government is estimated at £820,000, as against £2,130,000 in 1907-08. Good rains in July and September 1914 finally relieved the situation and ensured a good kharif crop.

### STOCK EXCHANGES.

There are about 365 Share and Stock Brokers in Bombay. They carry on business in the Brokers' Hall, bought in 1899 from the funds of the **Share and Stock Brokers' Association** formed to facilitate the negotiations and the sale and purchase of Joint Stock securities promoted throughout the Presidency of Bombay. Their powers are defined by rules and regulations framed by the Board of Directors and approved by the general body of Brokers. The Board has the power to fix the rates in times of emergencies. It is composed of Sir Shapurji Broacha (Chairman), Mr. Parbhudas Jivandas (Vice-Chairman), Mr. Maneckjee Pestonji Bharucha, Mr. Shapurjee Sorabjee Mahimvala, Mr. Nasserwanji Pherozsha Karani, Mr. Nagji Motichand, Mr. Hirachand Vasanji, Mr. Bhaladas Goculdas, Mr. Vadilal Punamchand and Mr. Jamnadas Morarji (Secretary).

At first the admittance fee for a broker was Rs. 5 which was gradually raised to Rs. 1,000. The fee for the Broker's card has increased and it was recently sold at Rs. 6,000. The rules of the Association were revised in October last and from the New Year the purchaser of shares has to pay the stamp and transfer fee instead of the seller. There are two classes of Exchange Brokers, Europeans and Indians, the latter being certified for recognition by the native Stock Exchange. Business in Government Paper and all other Trustees' Authorised Securities is carried on under the rules of the Bombay Stock Exchange, but in the street outside the hall.

For many years the **Calcutta Share Market** had its meeting place in various gullies in the business quarter and was under no control except that of established market custom. In 1908 the **Calcutta Stock Exchange Association** was formed, a building was leased in New China Bazar Street now called Royal Exchange Place, a representative committee was formed, and the existing trade customs were focussed into rules drawn up for the con-

duct of business. Admittance as a member of the Stock Exchange is by vote of the committee, and the entrance fee is at present Rs. 500. The market custom differs very materially from that of most other Stock Exchanges since there are no settlement days, delivery is due the second day after the contract is passed and sales of securities are effected for the most part under blank transfers. Another difference in procedure as compared with the London Stock Exchange is that there are no "Jobbers" in the Calcutta market. The Dealers who take their place, more or less, are not compelled to quote a buyer's and a seller's rate and are themselves Brokers as well as dealers, calling upon the Banks and other clients and competing with Brokers.

There are about 150 members, besides outside brokers, the former consisting of European, Jewish, Marwari, and Bengalee firms. The Marwaris predominate. The volume of *bona fide* investment business is comparatively small and insufficient for the number of Brokers. The principal business transacted on the Calcutta Stock Exchange is connected with the shares in Jute Mills. Coal Companies, Tea Companies registered in India, Miscellaneous Industrial concerns (such as Paper, Flour, Sugar), Railway and Transit Companies and Debentures, the latter comprising those of Industrial concerns and Trustee's Investment Securities, namely Municipal and Port Trust Debentures. When speculative operations are being actively engaged in, which frequently take the form of forward contracts for delivery in three months' time, the value of securities changing hands may aggregate as much as a crore of Rupees per month, but since the trade is not constant and one year differs very much from another it would be difficult to estimate what the average annual turn over would amount to. The association has an honorary secretary and is not at present affiliated to the Bengal Chamber of Commerce.



## Co-operative Credit.

Before the end of the last century the co-operative movement had proved so successful in its attempt at generating rural life in countries with such diverse conditions as Germany, Italy, Switzerland and Ireland, that enthusiasts like Mr. Wolff, social workers like the late General Booth, and Indian administrators like Sir Anthony (now Lord), Macdonell and Mr. Dupernex were anxious to introduce the movement to improve the economic and moral condition of the Indian ryot. More than sixty per cent. of the vast population of India subsists on agriculture and the majority of these millions generally live, under present conditions, from hand to mouth. The ryot's occupation is healthy and productive, and he is proverbially honest and straightforward in his dealings, except when years of famine and hardship make him at times crafty and recalcitrant. Owing to his poverty, combined with deficiency in education and consequent lack of foresight, however, he has to incur heavy debts to meet occasional expenses for current seasonal purposes, the improvement of his land, or for ceremonial purposes, and he has therefore to seek the assistance of the local money-lender, known as the Sowkar or the Mahajan. The rates of interest on such advances vary from province to province and even in different parts of a province. The average rate ruling throughout Bombay Presidency is lower than in most other provinces and there are again variations in the rate in the Presidency itself. It is 6 to 12 per cent in Gujarat, and 12 to 24 per cent in parts of Deccan, while it rises to the enormous figure of 50 per cent. in several tracts. In addition to charging these exorbitant rates the Sowkar extorts money under various pretexts and takes from the needy borrower bonds on which heavy stamp duties are payable. One of the chief causes of the ryot's poverty is, that owing to the absence of security and his short-sightedness due to want of education he does not as a rule collect and lay by his savings, but fritters away his small earnings in extravagant and unproductive expenditure on the purchase of trinkets and ornaments and on marriage and other ceremonies. In some cases, he hoards coins under the ground with the likelihood that on his death the money is lost to his family for good. This absence of thrift and the habit of dependence, in case of difficulty, on the Government or on the Sowkar are the bane of his life. There is besides a total absence of ideals or desire for progress. A Co-operative Society would change all this, inasmuch as it would provide him with a suitable institution in which to lay by his savings and would teach him the valuable lesson of self-help through the sense of responsibility he would feel in being its member. Thus the chronic poverty and indebtedness of the Indian agriculturist afford a very good field for the introduction of co-operative methods, especially as his work is of a productive character likely to enable him to earn a better living under circumstances more favourable than they are at present.

**First Scheme Proposed.**—The question of improving rural credit by the establishment of agricultural banks was first taken up in the early nineties when Sir W. Wedderburn, with

the assistance of the late Mr. Ranade, prepared a scheme of Agricultural Banks which was approved of by Lord Ripon's Government but was not sanctioned by the Secretary of State. The matter was not again taken up until about fifteen years later when Lord Wenlock's Government in Madras deputed one of its ablest officers, Mr. F. A. (now Sir Frederick) Nicholson, to report on the advisability of starting Agricultural and other Land Banks in the Presidency for the relief of the agriculturists. Sir Frederick had prepared himself by a thorough study of Agricultural Banks and Co-operative Societies and had visited many European countries to see for himself the various developments of the co-operative movement. He was also conversant with the social conditions of the Presidency where there had been in existence an institution called the Nidhi, which corresponded in some respects to the Provident Funds and Friendly Societies in European countries. Though these institutions provided cheap local capital to the agriculturists the spirit of co-operation was lacking in them. This want was supplied in early times by the Village Panchayats which showed to what extent communal life and ideas of local self-government had developed in India. Sir Frederick, after thoroughly going into the conditions of the Presidency, submitted an exhaustive report to Government suggesting that the formation of Co-operative Societies afforded an excellent means for relieving rural indebtedness. The report surveyed the growth of the co-operative movement in European countries, the conditions favourable to its development in India, it introduced, and the difficulties to be encountered in introducing it and making it a success here. Finally, it contained for the consideration of Government a draft Bill for the organization of Co-operative Societies. Sir Frederick pleaded for concessions to be given to the Societies—such as exemption from the Income-tax and remission of the stamp duty—as he felt that it would be possible to attract the people to the new movement only if Government showed its active sympathy towards it at the commencement. He ended with a fervent appeal to the non-official community “to find a Raiffeisen” who would help the ryots of this country in achieving results equal to those obtained by Raiffeisen's noble efforts in Germany. Unfortunately the report was not received favourably either by the non-official public or by the Government of Madras, and no action was taken on its suggestions.

**Famine Commission of 1901.**—The next few years saw two of the worst famines that India had ever suffered from, and in 1901, Lord Curzon appointed a Commission to report on the measures to be adopted in future to prevent famines and to protect the ryot from their ravages. The Commission laid stress on the proper working of the Agriculturists' Loans and the Land Improvement Loans Acts under which takavi advances are made to cultivators. This system was given a long trial in the years previous to the great famines as well as during the ten years succeeding the 1899-1900 famines. But it is acknowledged on all hands that the system has been a failure

as it is clear that it is not facility for obtaining cheap capital alone which will raise the agriculturist and relieve him from his debts, but the provision of capital combined with the inculcation of habits of thrift and self-help. The Commission also recommended that the principal means of resisting famines was by strengthening the moral backbone of the agriculturist and it expressed its view that the introduction of co-operation in rural areas might be useful in securing this end.

**Co-operative Credit Societies' Act.**—These recommendations induced Lord Curzon to appoint a Committee with Sir Edward Law at its head to investigate the question and a Report was submitted to Government recommending that Co-operative Societies were worthy of every encouragement and of a prolonged trial. Sir Anthony (now Lord) Macdonell and others were at the same time making experiments on similar lines in the United Provinces and the Punjab with satisfactory results. All these activities, however, took a practical shape only when Lord Curzon, with his zeal for getting things done which made him famous in India, took up the question in all earnestness, and his Government introduced in the Supreme Legislative Council a Bill to provide for the constitution and control of Co-operative Societies. The main provisions of the Bill which became the Co-operative Credit Societies' Act (Act X of 1904) were:—

(1) That any ten persons living in the same village or town or belonging to the same class or caste might be registered as a Co-operative Society for the encouragement of thrift and self-help among the members.

(2) The main business of a Society was to raise funds by deposits from members and loans from non-members, Government and other Co-operative Societies, and to distribute money thus obtained by way of loans to members or with the special permission of the Registrar, to other Co-operative Credit Societies.

(3) The organization and control of Co-operative Credit Societies in every Presidency were put under the charge of a Special Government Officer called the Registrar of Co-operative Credit Societies.

(4) The accounts of every society were to be audited by the Registrar or by a member of his staff called the Auditor of Co-operative Credit Societies.

(5) The liability of a member of a society was to be unlimited in the case of a Rural Society.

(6) No dividends were to be paid on the profits of a rural society, but the profits were to be carried at the end of the year to the Reserve Fund, although when this fund had grown beyond certain limits fixed under the bye-laws, a bonus might be distributed to the members.

(7) In the case of Urban Societies no dividend was payable until one-fourth of the profits in a year were carried to the Reserve Fund.

Soon after the passing of the Act the local Governments in all the Presidencies and major provinces appointed some of their best officers as Registrars with full powers to organise,

register, and control the management of societies. In the early stages of the working of this Act, Government loans were freely given and the response to the organising work of the Registrars was gradual and steady throughout most parts of the country.

**New Act Introduced.**—As co-operation progressed in the country defects were noticed in the Co-operative Credit Societies' Act and these were brought to the notice of Government by the Provincial Conferences held under the auspices of Local Governments in various Presidencies, as well as by the Annual Conferences of the Registrars. In two directions the need for improved legislation was especially felt. In the first place, the success of credit societies had led to the introduction of Co-operative Societies for distribution and for purposes other than credit for which no legislative protection could be secured under the then existing law. And in the second place, the need for a freer supply of capital and for an improved system of supervision had led to the formation of various central agencies to finance and control the original credit societies and these central agencies ran all the risks attendant on a status unprotected by legislation. The Government of India, recognising the need for removing these defects, decided to amend the old Act, and a Bill embodying the essential alterations proposed was introduced in the Imperial Legislative Council, and after a few amendments it emerged from the Council as the Co-operative Societies' Act (II of 1912) replacing Act X of 1904. The outstanding features of the new Act were as follows:—

(a) It authorised the formation of societies for purposes other than credit, which was possible under the old Act only with the special permission of the Local Government. This extension of Co-operation to purposes other than credit marks an important stage in its development in India.

(b) It defined in precise terms the objects for which Co-operative Societies could be organised.

(c) It removed the arbitrary division of societies into Rural and Urban.

(d) It facilitated the growth of sound central agencies by insisting on a limited liability by means of a special clause about the registration of a society one of whose members is a registered society.

(e) It empowered the Local Government to frame rules and alter bye-laws so as to put restrictions on the dividends to be declared by societies and allowed them the discretion to sanction distribution of profits in the case of unlimited liability societies to their members.

(f) It allowed societies with the permission of the Registrar to contribute from their net profits, after the Reserve Fund was provided for amounts up to 10 per cent. of their remaining profits to any charitable purpose as defined in the Charitable Endowments' Act. This kept the movement in touch with local life by permitting societies to lend assistance to local educational and charitable institutions.

(g) It prohibited the use of the word "Co-operative" as part of the title of any business concern except a registered society.

**Composition of the Capital of Agricultural Societies.**—On the organization of agricultural credit was necessarily concentrated the attention of the promoters, for it presented a far more important and far more difficult problem than industrial credit. There was a great variety of types among the agricultural societies started in different provinces, and some Registrars adopted the "Schulze-Delitzsch," some the "Raiffeisen," and some the "Luzzatti" methods in their entirety. The best course as pointed out by Mr. Wolff would have been to start a few model societies and leave the movement to develop on the lines which most suited the peculiar requirements and conditions of the country. The commonest type, as in the Punjab, Burma, and the United Provinces, is the unlimited liability society with a fee for membership and a small share capital, the share payments to be made in instalments. In some cases the system insists on compulsory deposits from members before entitling them to enjoy the full privileges of membership. The system in Bombay, Bengal, and the Central Provinces is entirely different, there being no share-capital but only a membership-fee. Part of the working capital is raised by deposits from members and other local sympathisers but the bulk of it is obtained by loans from Government and other Co-operative Societies. In all the Presidencies, the Government set apart every year a certain sum to be advanced as loans to newly started Co-operative Societies, usually up to an amount equal to the deposits from members, raised by a society. State aid in the form of money does has now become an exception rather than the rule, and this withdrawal in no way hampers the development of the movement on account of the rapid increase of financing agencies like District and Provincial Central Banks and the growth of public confidence in the primary societies. For agricultural societies generally, the main sources of income are share capital, deposits of members, loans and deposits from non-members and from Central and other Societies; and the contribution to the total working capital by each of these heads of income is in round numbers that indicated below :—

	Rs.
Shares .. .. .	65,00,000
Deposits from members .. .. .	33,00,000
Loans and deposits from non-members .. .. .	37,00,000
Loans and deposits from other societies .. .. .	2,68,00,000
State Aid .. .. .	11,00,000
Reserve Fund .. .. .	38,00,000

In some Provinces, notably in the Punjab and Bombay, the members' shares and deposits form more than 25 per cent. of the working capital.

**Constitution of Agricultural Societies.**—The typical Agricultural Society in India corresponds to the "Raiffeisen" society, the management being gratuitous, the profits indivisible, and the area of work limited. Usually, the Secretary if he is a *bona-fide* member of the Society, gets a monthly pay of Re. 1 to Rs. 5 with a bonus at the end of the year equal

to a fourth of annual profits. In parts of the country there are villages where a few literate men may be found but most of these are hardly fit enough to undertake the responsible work of a Secretary, being practically ignorant of account keeping. In such villages either the village school-master or the village accountant, known in Bombay as the Kulkarni or Talati, is appointed to the post with a remuneration a little higher than that paid to the Secretary who is a *bona-fide* member. In some places, where a suitable person is not available on this low pay, neighbouring societies are grouped together with a whole-time, well-paid, and competent Secretary. This arrangement, which has its advantages, involves the drawback that the outsider working as Secretary does not naturally feel as much interest about the Society's working as a *bona-fide* member does and is less amenable to the control of the members. As the work of Societies develops, the need for trained Secretaries is being felt more keenly for it is now realized that the function of a Secretary does not consist merely in writing the accounts correctly. With a view to meet the demand for trained Secretaries, a training class was organized in Bombay in August 1916 by the Servants of India Society with the assistance and support of the Registrar of Co-operative Societies, Bombay, and a few local co-operators. Thirty Secretaries selected by the Registrar attended the class and had all their expenses defrayed by Government. Lectures were delivered at the class on the details of the work of co-operative societies and on the main principles of co-operation. This interesting experiment deserves to be copied in other parts of the country.

**Internal Management of Societies**—The Managing Committee consists of 5 to 9 intelligent members of the Society, the Chairman being usually the leading person in the village. The daily work of the Society is carried on by the Secretary, but the Managing Committee supervises the work and has alone the power to admit new members, to receive deposits, arrange for outside loans, grant loans to members and take notice of defaulters. The accounts of the Society are kept by the Secretary and the necessary forms, papers, and books are supplied from the Registrar's office to simplify the work of the Secretary. The books are kept according to the rules framed by the Local Governments and are open to inspection by important local officials and the Registrar and his staff. The accounts are audited, at least once a year, by the Auditor of Co-operative Societies and the Societies are inspected from time to time by specially appointed Inspectors. The loans are mostly given on the security of two co-members, or rarely, on the simple bond of the borrower. Under the Act, the Societies are allowed under certain conditions to advance loans on the hypothecation of moveable or immoveable property and there is nothing unco-operative in this so long as persons' security which is the central principle of co-operation is given and the borrower's property is recognized as only a secondary or collateral protection. Mortgages are taken occasionally especially in the case of long term loans and loans for the liquidation of old debts. In some Provinces more general use has been made of mortgage

security than in others, and mortgages have been at times more freely accepted as security than is either necessary or desirable. In Madras the percentage of loans secured on mortgage on the total amount advanced during 1913-14 was 47, in Bombay 43, in Burma 36, the average for all the Provinces being 14 per cent. This feature is noteworthy as real credit on a wholesale scale is not quite compatible with the true spirit of co-operation. At the Annual General Meeting held within a month of the close of the co-operative year, the accounts are submitted, the balance-sheet passed, and a new Managing Committee with, if necessary, a new chairman and secretary is elected. The general meeting fixes the borrowing limit of individual members, lays down the maximum amount upto which the Managing Committee may borrow during the ensuing year, dismisses members for misconduct or serious default, and settles the rates of interest for loans and deposits. As these meetings are informal, other local topics of public utility are sometimes discussed. All the net profits of the society are annually carried to the Reserve Fund, which is indivisible, that is, incapable of distribution as dividend or bonus, which

cannot be drawn upon without the sanction of the Registrar, and which must be invested in such a manner as the Registrar prescribes. It is intended to meet unforeseen losses and to serve as an asset or security in borrowings. Except in the Central Provinces and Madras, the Reserve Funds of primary societies are generally utilised as an addition to their working capital though steps are being taken in some parts of the country to stop this practice and to insist on the Reserve being kept entirely apart from the working capital and invested in Government securities or placed as floating deposits in reliable Central Banks. The Government of India state in their Resolution of 17th June 1914 "that while there may be advantages in the earlier stages in using the Reserve as part of the working capital of the society, it should gradually, as it becomes more important, be set apart for separate investments." The amount of the Reserve Fund of agricultural societies is roughly 38 lakhs of Rupees, and forms 8.4 per cent. of their total liabilities and with the addition of the last year's profits to be carried to Reserve, 12 per cent. of the total outside capital of the societies including members' deposits.

**Progress of the Movement.**—The following statement shows the progress of Agricultural Societies upto the end of the official year 1914-15 :—

Provinces.	Number of Societies.	Number of Members.	Total Working Capital.	Reserve Fund.	Net Profit during the year 1914-15.	Usual Rate of Interest on Loans to Members.
			Rs.	Rs.	Rs.	Per cent.
Madras .. ..	1,446	90,088	64,55,588	4,07,632	1,42,517	9½
Bombay .. ..	692	52,540	35,90,414	2,20,613	90,938	9½
Bengal .. ..	1,862	85,717	52,87,813	4,54,888	2,08,625	12½
Bihar and Orissa ..	1,019	45,304	17,34,054	1,40,732	92,583	15½
United Provinces ..	2,716	101,753	49,88,282	3,55,083	1,43,760	15
Punjab .. ..	3,267	154,066	1,36,72,723	15,03,368	7,28,095	12½
Burma .. ..	1,320	32,375	41,62,560	4,45,180	2,15,118	15
Central Provinces ..	2,158	37,053	27,79,716	1,38,170	74,475	12
Assam .. ..	272	13,698	3,47,303	49,521	18,110	12½
Coorg .. ..	33	2,027	1,13,160	48,932	8,146	12½
Ajmer .. ..	355	11,264	7,03,015	.. ..	44,374	12
Mysore .. ..	581	29,591	10,72,767	21,829	51,951	9 to 12
Baroda .. ..	286	8,071	5,36,500	66,977	30,390	9½
<b>TOTAL ..</b>	<b>16,016</b>	<b>664,446</b>	<b>4,54,44,795</b>	<b>38,22,942</b>	<b>18,58,001</b>	<b>....</b>

The progress of the movement in different provinces varies according to the activity in organisation work as well as the special conditions of each province—the prevailing rates of interest being the most important of these. A few Indian States have also introduced legislation similar to the Co-operative Societies' Act in their territories and the most prominent of these are Mysore and Baroda. Hyderabad, Gwalior and Indore have only very recently introduced co-operation in their States. The results of the experiment have been as satisfactory as in British India.

**Non-agricultural societies.**—Just as rural societies are the means of reuniting the agricultural and other small village industries;

a class of societies called the non-agricultural societies, has grown in towns and cities for improving the economic and moral condition of artisans and small traders, members of particular castes and employees and of big firms and Government departments. These societies have usually a limited liability. This is due partly to the absence of any assets in real property among their members, but mainly to the field of their work not being compact as in the case of agricultural societies where every member may be expected to know every other member. Their constitution is based on the 'Schulze Delitzsch' model and in most cases the management is honorary, though sometimes, when the sphere of society's

work is extended, a paid staff is employed. There is in all societies a substantial share capital, payments being made in instalments, and the rest of the working capital is obtained by local deposits from members and others and loans from co-operative and Joint Stock Banks. Of the total working capital of roughly Rs 94,00,000, Rs. 17,00,000 represent loans and deposits from non-members, Rs. 8,00,000 loans and deposits from other Societies, Rs. 24,00,000 deposits from members, Rs. 37,00,000 share capital, Rs. 5,00,000 reserve fund and Rs. 75,000 State aid. At the end of every year, one-fourth of the net profits must be carried to the reserve fund and the balance may be distributed as dividend or bonus. There are a few serious drawbacks in the working of these societies and complaints about them are noticeable in many of the Registrars' annual reports. The most serious of these complaints are that the spirit of co-operation is lacking in many non-agricultural societies, that there is too great a desire to go in for profits and dividends and a growing tendency to make the societies close preserves once they have started running on profitable lines. The rates of interest on loans are at times higher than they ought to be, and the men at the head of the societies are loth to admit new members who are in need of loans for fear of the latter cutting down the profits. Societies of employees of firms, railway companies, and Government offices, and societies for the redemption of the debts of men of the so-called depressed classes, however, work on sounder lines and provide good instances of the

success of non-agricultural co-operation. There are, again, a few societies organized on the lines of village Popular Banks of Europe to assist small non-agricultural traders and artisans, and some efficient societies comprising members of particular communities. Some of these non-agricultural societies, after meeting the needs of their members, have large balances on hand, which they are allowed, with the previous sanction of the Registrar, to advance to smaller societies.

With the establishment of factories in India an important labouring class has grown up in big industrial towns and this class is as deeply indebted and as badly remunerated as the agriculturists. Co-operation, if introduced among people of this class, would open a new life to them besides being the means of their economic regeneration. No serious efforts have hitherto been made in this direction, as urban co-operation has hitherto been confined more or less to middle class people. Under the auspices of an organization known as the Debt Redemption Committee, 18 mill hands and working men's societies have been organised in Bombay. These Societies have been successful in redeeming the old debts of some 500 members to the extent of Rs 1,50,000 in the course of the last three years. The working capital of the Societies is only Rs. 65,000 to which the deposits from members contribute Rs 10,000. But societies should be multiplied a hundredfold among all classes of factory labourers, so that, if successful, they may become the forerunners of a healthy Trade Unionism in India.

**Progress of Non-agricultural Societies.**—The following statement shows the progress of Non-agricultural Co-operation up to the end of the year 1914-15:—

Provinces.	Number of Societies.	Number of Members.	Total Working Capital.	Reserve Fund.	Net Profit during the year 1914-15.
			Rs.	Rs.	Rs.
Madras .. .. .	124	27,603	18,19,944	1,17,985	86,957
Bombay .. .. .	138	31,706	25,07,657	96,380	1,03,870
Bengal .. .. .	84	16,340	16,13,382	64,606	83,579
Bihar and Orissa .. .. .	49	7,417	2,06,670	9,654	8,436
United Provinces .. .. .	188	6,270	4,61,113	29,363	15,552
Punjab .. .. .	30	2,354	1,86,541	21,960	19,455
Burma .. .. .	43	3,574	6,02,869	91,422	51,453
Central Provinces .. .. .	93	2,023	1,20,693	11,889	9,753
Assam .. .. .	20	1,821	2,60,010	15,707	13,058
Coorg .. .. .	....	....	....	....	....
Ajmer .. .. .	....	....	....	....	....
Mysore .. .. .	127	23,041	15,25,654	67,806	94,194
Baroda .. .. .	18	976	79,720	1,463	2,031
<b>TOTAL ..</b>	<b>914</b>	<b>123,215</b>	<b>93,84,262</b>	<b>5,28,235</b>	<b>4,88,338</b>

**NOTE.**—The rates of interest on loans in the different provinces are the same as in the case of the agricultural Societies.

**Loans advanced.**—The total amount of loans advanced to members by agricultural and non-agricultural societies during the year 1914-15 were Rs. 1,96,12,695 and Rs. 88,28,579, respectively, as against the total of less than Rs. 25 lakhs issued by both these classes of societies in the year 1906-7. Reports from all the Provinces do not give statistics regarding the objects for which loans are advanced, but from those published in some of the Provinces, it appears that the percentage of loans given for cultivation expenses by agricultural societies is 7 in Madras, 10 in Bengal, 16 in Behar and Orissa, 9 in the Punjab and 22 in the Central Provinces, and that loans for purchase of cattle form 10, 8, 16, 20% and 30% of total amount of loans advanced in the respective Provinces. Loans for repayment of old debts are frequent, as is apparent from the fact that in Madras they form 41% of the total amount of loans given, in Bengal also 35% in Behar and Orissa 31%, in Punjab 17%, and in the Central Provinces 15%. As the movement progresses, it is being more and more realised that the early clearance of a member from previous debts after his admission to a society is very desirable and greater attention is being bestowed by the Registrars on this question. It is impossible to insist on the restriction of loans to productive objects and there are circumstances under which unproductive loans are permissible and even advisable. What should be and generally is borne in mind is that precautions are taken by societies that the expenditure is inevitable and that it is not excessive in demand. The chief objects of the loans advanced are cultivation expenses, purchase of live-stock, fodder, seed, manure and agricultural implements, land improvement and sinking of wells, purchase of new lands, and personal maintenance in times of scarcity in agricultural societies, and for purchase of raw materials for industries, for trade, for house-building and for food and other necessities of life in non-agricultural societies. The terms of the loans are one year or less on those for current needs whether for agriculture or petty trade, and up to five years or so on loans for liquidation of old debts or for land improvement. The percentage of the loans repaid by the members of agricultural purposes in 1914-15 to the total amount of loans outstanding in 1913-14 and advanced in 1914-15 was 27, the average for the last four years being 30 per cent. An unsatisfactory feature of the co-operative system in some of the Provinces is the laxity and unpunctuality in the matter of repayment of loans by members and a general apathy in the matter on the part of societies. The amount of loans overdue from members at the end of the year 1914-15 stood at 17 per cent. of the total outstandings due to societies. As co-operation is both financially and educationally a failure unless promptitude of payment is ensured, no efforts are spared by organizers to educate societies in this respect. The Co-operative Societies' Act grants to societies priority of claim against other creditors (except the State or the landlord) to enforce any outstanding demand due to the societies from members or past members upon the crops or other agricultural produce, and upon the cattle, fodder or agricultural implements, in cases

where loans have been advanced for the purposes specified. But not content with this, some co-operators have pleaded for special powers of recovery of loans under which overdue loans may be recovered as arrears of land revenue. Most local Governments have framed rules under the Act enabling the Registrar to refer disputed claims to arbitration and to enforce the award of the Registrar in the same manner as a decree of the Civil Court. It is not likely that Government will sanction a special process under which claims against defaulting members may be recovered according to procedure allowed for the recovery of arrears of land revenue. For the existence of a special privilege of this character cannot but lead to laxity in the selection, of members and carelessness in the granting of loans and in securing regular repayments on them.

**The Financing of Agricultural Societies.**—As soon as the initial stage of the movement had passed, a very urgent problem had to be faced. This was to finance the agricultural societies that were growing in all directions. And the problem was solved in different provinces according to the special conditions and the stages of development the movement had attained therein. In Madras a Central Bank, which lent to Co-operative Societies in the Presidency, was started without Government aid as early as in 1907. This was followed by the starting of banks at district head-quarters. In other Presidencies, District Banks were established making good the deficiency in the local capital of the societies within their districts, and in some places Joint Stock Banks were persuaded to make advances direct to agricultural societies or through the medium of District Central Banks. A large number of prosperous non-agricultural societies, as stated above, could afford to lend to agricultural societies. Government aid was also freely given and the advances under this head rose from Rs. 2,84,738 in 1906-07 to Rs. 9,34,663 in 1911-12. With the progress of the movement, however, this aid was discontinued and the only Province which continued the practice was Bombay lending Rs. 2,57,439 in 1911-12. An important cause which led to the continuance of State aid in Bombay was the paucity of Central Banks in the Presidency and the refusal of the Commercial Banks, though constantly approached, to help agricultural societies. When owing to the unwillingness of the ordinary Banks to participate in the movement, the Registrar found it extremely difficult to have even the small number of societies in the Presidency properly financed, Sir Vithaldas Thackersey and the Hon. Mr. Lalubhai Samaldas submitted to Government a scheme to establish a Central Bank for the Presidency, provided certain assistance was promised by Government. As a result of the negotiations that followed, the Bombay Central Co-operative Bank was founded in October 1911, with a share capital of Rs. 7 lakhs and with power to issue debentures at 4 per cent. up to three times the amount of the paid-up share capital, the Government guaranteeing payment of interest on the debentures till their repayment. The Bank was authorised to lend only to registered co-operative societies in the Presidency with the previous sanction of the Registrar in the case of every individual loan. As an indirect

result of the establishment of the Bombay Central Bank, a number of District Banks have since been started in the Presidency.

The drawback of the Bombay and the Madras Central Banks is that neither is a co-operative Apex Bank in the true sense of the term. In the Bombay Central Bank Co-operative Societies are now encouraged to become members and may be expected gradually to assist in shaping its general policy. The share holders of the Madras Central Bank, on the contrary, refuse to admit Societies as members and proposals are already afoot to start a new Provincial Bank on sound co-operative lines. A Provincial Bank with three Central Banks affiliated to it is in existence in Upper Burma and this Bank finances primary societies either through the affiliated banks or through the guaranteeing or supervising unions composed of societies. An Apex Bank has recently

been started in the Central Provinces to form an immediate link between the District Bank in the Province and the Commercial Bank in Allahabad and elsewhere. It has worked well and its success led to the establishment of a Provincial Bank with a similar constitution in Behar and Orissa. A scheme has also been set afoot for having a Provincial Apex Bank in Bengal, where as also in Bihar and Orissa, the primary societies are at present financed by Central Banks at district or taluk headquarters. In the United Provinces primary societies are financed on the same system and there, too, a Provincial Apex Bank under which Central Banks will be federated is in process of formation. The Punjab has a Central Banking system and though soon or later it, too, will have an Apex Bank, no definite proposal for the establishment of such a Bank has yet matured.

**The Working of Central Societies.**—The following statement shows the number and the constitution of the Central Societies in the country up to the end of the year 1914-15 :-

Provinces.	Number of Societies	Number of Members.	Total Working Capital.	Reserve Fund.	Net Profit during the year 1913-14.	Usual Rate of Interest on Loans to Societies.
			Rs.	Rs.	Rs.	Per cent.
Madras .. ..	30	496	59,34,613	96,605	1,03,575	7½
Bombay .. ..	6	1,889	20,74,517	17,124	37,025	7 to 9½
Bengal .. ..	46	5,061	40,93,137	75,582	1,11,737	9½
Bihar and Orissa ..	19	1,926	17,09,685	28,352	52,581	12½
United Provinces ..	58	11,250	62,99,749	3,86,446	1,51,517	12
Punjab .. ..	40	2,751	52,80,507	88,078	1,11,052	8
Burma .. ..	117	3,162	34,34,133	53,332	43,338	9
Central Provinces ..	46	7,074	43,20,423	66,656	1,13,848	9
Assam .. ..	10	503	1,99,172	7,348	7,083	9
Coorg .. ..	..	..	..	..	..	..
Ajmer .. ..	5	841	8,15,243	14,330	21,884	10
Mysore .. ..	17	635	4,87,326	7,034	15,375	7 to 7½
Baroda .. ..	3	220	1,84,060	1,144	2,792	6½, 7 & 9
TOTAL ..	397	36,808	3,18,32,665	8,42,034	7,71,807	..

The constitution of Central Banks is not uniform, but the existing Banks may be classified under three general heads:—(1) Banks of which the membership is confined to individuals or where societies are admitted as members on exactly the same footing as individuals, (2) Banks of which the membership is confined to Societies, and (3) Banks which include Societies and individuals as their members and secure to Societies separate representation on

the Board of Directors. The number of Central Banks in the various Provinces (exclusive of Native States) falling under each of the three classes described above are approximately as shown below:—

PROVINCES.	Pro- vincial Banks.	Central Banks. (1)	Pure Banking Unions. (2)	Mixed Banking Unions. (3)	Guaran- teeing Unions.	Agri- cultural Unions.	Pro- vincial Unions	Total.
Madras .. ..	1	3	1	5	19	..	1	30
Bombay .. ..	1	..	1	3	1	..	..	6
Bengal .. ..	..	2	6	30	8	..	..	46
Bihar and Orissa ..	1	..	1	17	..	..	..	19
United Provinces ..	..	..	11	47	..	..	..	58
Punjab .. ..	..	13	20	7	..	..	..	40
Burma .. ..	1	..	..	3	112	1	..	117
Central Provinces ..	1	..	..	29	..	15	1	46
Assam .. ..	..	2	..	5	3	..	..	10
Ajmer .. ..	..	..	..	5	..	..	..	5
Mysore .. ..	..	..	..	17	..	..	..	17
Baroda .. ..	1	..	1	1	..	..	..	3
TOTAL ..	6	20	41	169	143	16	2	397

**Functions of Central Banks:—**The functions of Central Banks are to balance the funds of Societies and to supply capital. But their duties should not be limited to the provision of banking facilities only, but should include the inspection and supervision of societies. Hence where the Central Banks are not formed on a capitalist basis, they perform the functions of supervision and control of the Societies affiliated to them and in some Provinces they also organise new Societies and even take up the entire educational work now done by the Registrar. They may also be expected to supplement, in lieu of a small fee to be paid by the societies, the auditing work done by the Registrars who now find it very difficult, owing to the increase in the number of societies, to cope with this work with the limited staff at their disposal. Usually the Central Bank is only possible for the whole of a district, as the personnel necessary for its successful working would be difficult to secure in a smaller area. However, in different parts of the country we notice the existence of Central Societies for talukas, and occasionally for smaller tracts. The creation of such bodies has been facilitated by the amended Co-operative Societies' Act, which came into force in 1912. Previous to the passing of this Act, Central Societies were started unsystematically in various Provinces according to local ideas, but their formation has been made uniform by the new Act insisting on a limited liability in the case of a society of which a member is a registered society. An important class of institutions included under the statistics of Central Societies are unions which may be described as federations of societies which are maintained for supervision, either combined or not with the assessment or guarantee of loans to primary societies, and which do not undertake banking business.

It may be mentioned that in most of the Provinces the work of organising and looking after the societies is done by the Registrar with

the help of assistants and a few honorary non-official workers. Where the Central Bank system has properly developed, the Directors of the Central Bank either themselves or through a paid agency organise societies and, as stated above, supervise their working. The number of honorary workers is steadily increasing and in some Presidencies there is a staff of specially-appointed Honorary Organisers who regularly assist the Registrars. There is, however, scope for Organisation Societies on the lines of similar institutions in England and Ireland, and if the District Banks and Unions are affiliated to a Co-operative Provincial Apex Bank, it may be possible to have an Organisation Department of the Bank with branches in the districts.

**Other forms of Co-operation.**—After the passing of the new Co-operative Societies' Act the application of co-operation to purposes other than credit was greatly extended, but as yet there has been no general demand for productive and distributive co-operative societies as is noticeable in England and elsewhere. At the end of the year 1914-15, there were very few store societies in the country, the Madras Presidency claiming 10 of these with a membership of 4,628 and a working capital of Rs. 2,47,818. In the United Provinces the number of store Societies has increased to seven. An important industry which flourished in India before the introduction of machinery was the Handloom Weaving Industry, and efforts have been made to revive it by the formation of productive co-operative societies of handloom weavers. The Weavers' Societies are not merely credit societies, but undertake the purchase of good yarn for members and in some cases have store branches to sell the cloth produced by them. They have also been instrumental, prominently in Bombay, the United Provinces, and the Central Provinces, introducing improved looms and methods amongst the conservative weaving classes. The number of these societies in Bombay is 29, in Bengal 4, in



Madras 1, in the United Provinces 2, (excluding a number of weavers' credit societies 4), in the Central Provinces 55, in Burma 4, in Assam 4, in the Punjab 12, in Behar and Orissa 8, and in Baroda 11.

Other non-credit societies are those for "gaolies" or milkmen, dyers, basket and brass workers in the Central Provinces and "Chammars" and "dhers" in Bombay. There are also building societies in Madras, a zamindari society in Bengal, and a Sugar Factory worked on co-operative lines in Benares. One of the most interesting experiments in non-credit co-operation is the Carpenters' Workshop at Bareilly in the United Provinces. A Housing Society has been started in Bombay and a Housing Association has been founded to encourage the formation of more such societies. There are eight Building Societies in

Madras and a few more in Mysore. There are a few dairy societies, the most well-known of these being those at Lucknow and Benares in the United Provinces. There are four Dairy Societies in the Bombay Presidency, one at Nagpur and one at Dacca. Co-operative Creameries and "ghee" producing societies have been started in some places. Burma possesses a novel type of societies for the sale of paddy, having 14 such societies. It is also a pioneer in the matter of co-operative insurance, and has 63 Cattle Insurance Societies with a membership of 1,089. Ten Cattle Insurance Societies have also been started in Coorg and five in the United Provinces. The total number of non-credit societies, whether agricultural or non-agricultural, is only 278. The following table exhibits the progress of other forms of co-operation in the different parts of the country. —

Type of Society.		Madras.	Bombay.	Bengal.	Bihar and Orissa.	United Provinces.	Punjab.	Burma.	Central Provinces.	Assam.	Coorg.	Ajmer.	Mysore.	Baroda.	TOTAL.
Purchase or Purchase and Sale	Non-Agricultural ..	11	25	1	11	7	18	..	..	..	..	..	31	..	104
	Agricultural ..	..	19	2	..	..	..	..	..	..	..	..	3	..	24
Production	Non-Agricultural ..	1	..	..	..	..	..	..	..	..	..	..	..	..	1
	Agricultural ..	..	1	..	..	..	..	..	3	..	..	..	1	..	5
Production and Sale	Non-Agricultural ..	..	1	1	..	1	..	..	1	..	..	..	1	..	5
	Agricultural ..	..	6	..	1	7	4	14	1	..	1	..	2	..	36
Insurance	Non-Agricultural ..	..	..	..	..	..	..	63	..	..	10	..	..	..	78
	Agricultural ..	..	..	..	..	5	..	..	..	..	..	..	..	..	..
Others	Non-Agricultural ..	9	3	1	..	..	..	..	..	..	..	..	..	..	13
	Agricultural ..	8	..	..	..	..	..	..	..	..	..	..	4	..	12
GRAND TOTAL ..		29	55	5	12	20	22	77	5	..	11	..	42	..	278

**Agricultural Co-operation.**—Agricultural societies have until recently been engaged only in supplying cheap credit to their members but there are various other fields of work to which they may extend their activities. Grain Banks may be started with advantage, receiving deposits in kind and allowing these to accumulate to be sold at profitable rates or distributed to the members in times of scarcity. Such Banks have been started in Bombay and Madras. Societies on a similar principle for the storage of fodder may assist in solving what is likely to become in the near future an important problem in rural economy. Another direction in which the co-operative principle is being adopted is the starting of societies for purchase of and distribution among members of good unadulterated seed. A number of small seed societies have been organized in the Bombay Presidency and in the Central Provinces the work appears to have been well organized. Societies for the co-operative

purchase and sale of manure will also prove a great boon, and a few such stores have been established in Madras, Bengal and Bombay.

In some places Credit Societies undertake the joint purchase of agricultural implements for members, while in others separate registered societies do this work. Where the system of District Central Banks has developed on right lines this work is taken over by these Banks for the Societies affiliated to the Banks.

Another interesting development is the starting of cattle-breeding Societies in the Central Provinces and elsewhere. It is anticipated that these Societies will assist in supplying the keen demand that exists for bulls of good stock. Agricultural Stores have been worked with a certain amount of success in Bombay and Madras. In Mysore there are two Societies for rice-hulling and the manufacture of jaggery and one for lift irrigation. Government has of late made attempts to bring the co-operative

movement in close touch with the Agricultural Department. Co-operation has already been successful to a considerable extent in redeeming the chronic indebtedness of the agriculturist, but if the improvement in his economic condition is to be permanent it is essential that he should be prevailed upon to adopt improved methods of production. The Agricultural Department does undertake propagandist work with this object, but its efforts have not proved as successful as they ought to be. A Co-operative Society provides just the effective agency to reach the agriculturists, and in many places societies have been the means of bringing home to the agriculturist the need for improved

methods and have been made the centres for the propagandist activities of the Agricultural Department and District Agricultural Associations. As a result, a few societies have been enterprising enough to purchase modern agricultural implements, recommended by the Department and to use the proper manures and the certified varieties of seeds. Wherever agriculture and co-operation have experienced the assistance which each can derive from association with the other, they are fast developing a truly organic connection. If the reorganisation of Indian agriculture grows apace with the spread of co-operation, there is no doubt that rural India will soon present a happier outlook than it does now

## RECENT GOVERNMENT ACTION

In July 1914, the Government of India issued a lengthy Resolution on co-operation in India, surveying its progress in the country during the last ten years. Though the Resolution was optimistic in tone, it criticized impartially the drawbacks of this new movement in India. It particularly emphasised the urgency of a proper financial organisation of societies and stated that "the responsibilities introduced by the addition to the co-operative organization of central and provincial banks are of a serious character. To supervise the relations of such institutions with the money market on the one hand, and with their constituent societies on the other, is a task which requires a considerable degree of technical skill, and the administration of the whole co-operative movement in the stages above that of the individual society is a matter which must in the immediate future engage the serious attention of Government and of the people." In October, the Imperial Government appointed a strong Committee under Sir Edward MacLagan to examine whether the movement especially in its higher stages and in its financial aspect was progressing on sound lines and to suggest any measures of improvement which seemed to be required. The enquiry was to be directed primarily to an examination of such matters as the constitution and working of Central and Provincial Banks, the financial connection between the various parts of the co-operative organization, the audit, inspection, and management of all classes of societies, and the utilization of the reserve funds. The scope of the enquiry was, however, in no way rigidly limited by the Government of India, for the Committee could at its discretion consider and make recommendations regarding any important aspect of the co-operative movement. The Committee travelled for four months visiting various centres in the larger provinces of India and examined during this tour 93 witnesses and inspected 135 societies of various kinds. In its report, which was issued in September 1915, the Committee stated that it had not confined its enquiries to the subjects referred to it, for it had to recognise that the financial welfare of the higher stages of the co-operative system was largely based on the soundness of the foundation. At the outset it may be remarked that in view of the present preponderance in the number of agricultural credit societies and the similarity of the general

principles which guide all classes of co-operation, the Report deals mainly with the institutions established for providing agricultural credit. In treating of primary societies the report points out the extreme care necessary in the formation of new societies and urges the extreme importance, from the standpoint of efficiency and financial stability, of systematically inculcating the main principles of co-operation. Stress is laid on the encouragement of thrift, and the Committee thinks that every effort should be made to increase the amount of local deposits in societies. It is recommended that the bye-laws of societies should be so framed as to allow the Annual General Meeting to assess and fix every year the total borrowing power of the Committee and the normal maximum borrowing power of each member. The Committee advocates the taking of sureties in all cases and the rigorous exaction of the sureties' liability when necessary and deprecates an extensive use of mortgages. While advocating the full use of the existing law in respect of recoveries from members, it has refused to support the claim put forward for a summary procedure in the execution of decrees and strongly deprecates the use of Government agency for the recovery of debts due to societies. In the opinion of the Committee it is necessary for all co-operative institutions to build up a Reserve Fund in the sense of surplus assets, and to make every effort to accumulate an "owned" capital to supply their working needs and to meet the claims of creditors on liquidation. Stress is laid on the necessity in the case of primary societies which take deposits of providing for themselves either by their own investments or by arrangements with the financing institutions an adequate fluid resource. After satisfying the requirements in this direction, where necessary, primary societies should be left to utilize their surplus assets in their own business. The function of supervising the primary societies devolves, according to the Committee, on the societies and can best be carried out by a staff paid for by the societies and responsible to them as also to their financing institutions. These duties, it is added, can be performed most in conformity with true co-operative methods by the formation of guaranteeing Unions of societies on what is known as the Burma model. These Unions form a link between the financing agencies and the societies

and bring the societies together most effectively for the purpose of mutual supervision, assessment of credit and recovery of loans. In the view of the Committee, a guaranteeing Union of some kind is advisable where the financing agency is a Central Bank, and essential in cases where a Bank dealing with a whole province attempts to deal with societies without the intervention of a Central Bank. Central Banks are at present of three classes according as their shareholders are all individuals, all societies, or some individuals and some societies, and while advocating the disappearance of the first class and the ultimate adoption of the second, the Committee believes that for the present the third or mixed form of constitution offers the best advantage. To balance the excesses and deficiencies in Central Banks and to supply them with funds it advocates the foundation at an early date of a co-operative institution at the head of each Province which does not now possess one. These institutions too should in the Committee's opinion have a mixed constitution in which individuals and co-operative Banks should both be represented. In view of the peculiar nature of co-operative finance, the Committee recommends that the period of deposits accepted by co-operative institutions should ordinarily be as long as possible, but that only in very special cases where Central Banks are in a position to secure debentures on immovable property should capital be raised by debentures. The necessity for building up an owned capital is emphasised as also the special necessity for central financing institutions to equilibrate their finances. The Committee comments on the absence of facilities for discounting co-operative paper and on the urgency, under the circumstances, of Central Banks maintaining fund resources sufficient to meet half the deposits due for repayment within the next twelve months, a standard of one-third being sufficient in the case of Provincial Banks. As in the case of primary societies, central institutions too may after satisfying the requirements in this respect be left to utilize their surplus assets in their own business. The Committee recognizes that its recommendations regarding the fund resource will entail a disarrangement of existing financial conditions and will in many cases involve a considerable raising of existing margins between the borrowing and lending rates. The Committee insists on the vital importance of proper audit and supervision. In the case of Central and Provincial Banks the audit of accounts should be done on payment either by professional or Government agency, the Registrar being responsible for the inspection and general supervision of these societies. For primary societies, the Committee thinks that the auditing staff may be divided into two sections (a) a staff maintained by Government for super-audit and (b) a staff maintained by co-operative institutions for original audit. The only prominent administrative concession recommended by the Committee is the introduction of a special procedure for recovery in liquidation. And another concession which may be much availed of if adopted is the suggestion that where loans under the Agriculturists' Loans or the Land Improvement Loans Act are being given by

Government on a large scale it should be open to societies to receive such loans for distribution to their members. The Committee recognizes that with the growth of co-operation a new factor in district administration has come into being and therefore desires that the District Officer be entitled to attend all meetings of Central Banks in his jurisdiction though it deprecates the devolution to the District Officer of duties assigned under the Act to the Registrar, or any general arrangement for making him an ex-officio Chairman of the Central Bank at District Headquarters. The Committee recommends that two controlling officers should be employed in each province and that there should be a Registrar or Joint Registrar for every 1,000 or fraction of 1,000 societies registered. The Registrar should be a whole time officer and his post should be included as a Collector's post in the cadre of the Province, the special qualification for the post being that he should be well-versed in co-operative literature relating to all countries and should, if possible, have gained some personal experience of the subject in Europe. The Committee has examined a proposal for the co-ordination of certain economic departments including those of Co-operation, Agriculture and Industries under a single officer of high standing in each Province and has recommended that a move be made in this direction as opportunity offers. The need for closer control by Government over the objects for which the co-operative organization is utilized and over the financial arrangements of the movement is emphasised and to meet the latter it is suggested that an officer with co-operative experience be appointed to act as Advisor to the Local and Supreme Governments. The Committee has finally examined the effect on the co-operative movement of recent famines, of banking crises, and of the present war, and states that the Government has hitherto given direct financial aid to co-operation in three ways, only, viz., (1) by the grant of initial advances to new societies, (2) by guaranteeing the interest on the debentures of the Bombay Central Bank and (3) by special advances in two Provinces to meet difficulties anticipated in connection with the war. The Committee expresses its concurrence with the present policy of Government so far as it represents a rejection of the system of money doles and of undue concessions, but points out that in order to make the movement self-sufficing it will be necessary to provide some means of rediscounting the promissory notes of societies either through the Presidency Banks or by means of a State Co-operative Bank and recommend that a careful examination be made of this question. The recommendations of the Committee are under consideration by Government. The minor recommendations made have already been given effect to, but the opinions of the Local Governments have been invited on the important ones. No review of the opinions of the various Governments on the recommendations of the Committee has yet been issued.

It is hardly possible to appreciate the effect of the co-operative movement in enabling the agriculturists to resist the rigours of a famine as also to judge the reaction of the latter on the co-operative organisation. For, after the

introduction of the co-operative movement in India, the country has not been affected by any widespread famines like those through which the greater portion of the country passed in 1898-1900. There has, however, been severe scarcity in Bombay and the United Provinces, but in neither of the two Provinces was the distress sufficiently crushing or widespread to render the assistance provided by the Societies inadequate for the needs of members. With a better appreciation of the dependence of the agriculturist on seasons, and a more systematic management of the funds of Central Societies it is anticipated that in future the situation arising out of a failure of rains will be satisfactorily met. In 1913 and the following months practically the whole of the country was subjected to a banking crisis of considerable magnitude, but a marked feature of this crisis was a tendency to withdraw deposits from non-co-operative institutions and place them in co-operative banks. The outbreak of the War brought another set of influences into play and there was a temporary tendency to withdraw deposits and a temporary cessation of new deposits. The disturbance was not serious except in two or three provinces and by the end of the year 1914-15 the situation became practically normal. In two of the Provinces where the situation caused some anxiety owing to the cessation of fresh deposits in Central Banks, the Government sanctioned advances to the extent of Rs. 5,00,000 to Central Societies to be utilized in case of urgent loans to agricultural societies or to meet withdrawals of deposits. Of the sum advanced, namely, Rs. 2,55,000, before the close of the year Rs. 1,12,000 were repaid in one province, and Rs. 20,000 out of Rs. 32,000 advanced in another. On the whole, therefore, the movement appears to have stood the test of the War much better than might have been expected.

**Defective Education.**—It is the experience of those who have to deal with the organisation and management of rural societies that the sad state of education among the agricultural population is not only a real hindrance to the development of co-operation but seriously endangers its very existence. There are villages where no schools exist and where there is hardly one individual who can read and write tolerably well. In most villages a few literate people can be found and it is these that form the nuclei of co-operative societies. Their ignorance in other matters is often so abysmal that it is hardly possible to instil into their minds even elementary notions of co-operation. Happily there are villages which are better off, where about 30 to 40 per cent. of the population are able to read and write and where one finds a dozen intelligent men who can understand the elements of co-operation. In a large number of societies, as has been pointed out previously, the secretaries who are the real managers are not *bona fide* members. This, it may be urged, is contrary to a fundamental principle of co-operation that there should be internal manage-

ment of the business, but it can scarcely be helped in a country where there are only a few among the total village population able to keep their own accounts much less to undertake the management of a society. It is true that co-operation provides a higher type of education, but when the ground work itself is lacking it is impossible to build up the super-structure.

**Social Reform.**—Co-operation has, in some places, stimulated the desire for education and members of rural societies have been known even at advanced ages to receive the elements of education to enable them to put their signatures on the society's papers, and to take a lively interest in the internal work of their societies. There are a few cases where a society has set its face against drunkenness, expelled members notorious for their intemperate habits and has in other ways worked for a better morality by insisting on a high standard of life. Societies have occasionally condemned excessive and even heavy expenditure on marriages, and have thus indirectly trained members to the habit of thrift. Liquidation of old debts again has been rendered possible to a great extent and many an agriculturist who was formerly in a state of chronic indebtedness has been relieved of all his debts and freed from the necessity of incurring new ones. Credit has been much cheapened and it is now possible for the agriculturist to borrow at 9 to 18 per cent. what he could not borrow at less than 20 to 75 per cent. formerly. It has been calculated that in interest alone the agriculturists of India, by taking loans from co-operative credit societies instead of from the village money-lenders, are even now saving themselves from an unnecessary burden of at least 20 lakhs of rupees. The village rates of interest have naturally gone down considerably and the Sowkar is, in most places, not the terror and the force that he was. Business habits have been inculcated with the beneficial result that the agriculturist has learnt to conduct his own work more efficiently. Thrift has been encouraged and the value of savings better appreciated. Participation in the management of societies has brought home to the members the important lessons of self-help and self-reliance; but the most important achievement of co-operation has been the instilling of a sense of communal life—a feeling of “all for each and each for all” amongst the members of a co-operative body. If these signs become as common as they are now rare, and if, over and above the economic benefits achieved by it, co-operation succeeds in its true aim—the building up of the character of the people and the promotion of their welfare by the inculcation of the ideas of thrift and the principles of self-help, and, above all, by showing the wisdom of mutual help and brotherliness amongst the neighbours—resuscitation of rural life conducive to more quickened national progress will not be far off.

# The Women's Medical Service for India.

This Service which was recently inaugurated under the auspices of the late Lady Hardinge, it included in the National Association for supplying female medical aid to the Women of India, generally known as the Countess of the Dufferin's Funds and is administered by the Central Committee of that Fund. The Government of India has so far allotted the sum of £10,000 per annum towards its maintenance. The present sanctioned cadre is twenty-five first class medical women, of which number five is for the purpose of forming a leave reserve. Recruitment of the service is made (a) in India by a medical sub-committee of the Central Committee which includes the Director-General, Indian Medical Service, the Honorary Secretary to the Central Committee, and a first-class medical woman; (b) in England, by a sub-committee, consisting of a medical man and two medical women conversant with conditions in India, to be nominated by the Home Committee of the Countess of Dufferin's Fund. These sub-committees perform the duties of a medical board examining candidates for physical fitness, and for return to duty after invaliding.

The Central Committee determines what proportions of the members of the Service is to be recruited in England and in India respectively. In the original constitution of the Service, duly qualified medical women who are in the service of, or who have rendered approved service to, the Countess of Dufferin's Fund, are to have the first claim to appointment, and thereafter special consideration is to be paid to the claims of candidates who have qualified in local institutions and of those who are natives of India.

**Qualifications.**—The qualifications are that the candidate must be (a) a British Subject resident in the United Kingdom or in a British Colony or in British India, or a person resident in any territory of any Native Prince or Chief under the suzerainty of His Majesty exercised through the Governor-General of India or through any Governor or other officer subordinate to the Governor-General of India. (b) Must be between the ages of twenty-four and thirty at entry. (c) She must be a first-class Medical Woman, i.e., she must possess a medical qualification registrable in the United Kingdom under the Medical Act, or an Indian or Colonial qualification other than L.M.&S. or Licentiate of a Medical College. In India registrable in the United Kingdom under that Act; but this condition does not apply at the original constitution of the Service to medical women in charge of hospitals who, in the opinion of the Central Committee, are of proved experience and ability. (d) The candidate must produce a certificate of health and character. But the Central Committee reserves the power to promote to the service ladies not possessing the above qualifications, but who have shown marked capacity. Members of the Service are required to engage for duty anywhere in India or Burma. Those recruited in England serve for six months, and those recruited in India for three months, in a General Hospital of the Province to which they

are deputed. After this period of probation has been satisfactorily passed their appointments are confirmed. The services of Members may be lent to Local or Municipal bodies, or to special institutions, which may be responsible for whole or part of the pay.

**Pay.**—The rates of pay are as follows:—During probation Rs. 350 per month; thereafter Rs. 400 up to the end of the 4th year: Rs. 450 from the 5th to the 7th year: Rs. 500 from the 8th to the 10th year: and Rs. 550 after the 10th year. But no member can be confirmed in the 400 rupee grade unless she has passed an examination in such vernacular as the Provincial Committee shall prescribe, within one year of her appointment. In addition suitable quarters are provided free of rent; or a house rent allowance to be determined by the Provincial Committee may be granted in lieu of it.

Members of the Service are permitted to engage in private practice provided it does not interfere with their official duties, and the Provincial Committee has the power to determine whether such duties are thus interfered with. Except in very special cases retirement is compulsory at the age of forty-eight. A member whose appointment is not confirmed, or who is dismissed, is granted an allowance sufficient to pay her passage to England.

**Leave Rules.**—(a) Casual Leave, which is occasional leave on full pay for a few days, and is not supposed to interrupt duty. (b) Privilege Leave, which is leave on full pay and is meant to provide a month's holiday in the year. If it cannot be granted during the year, it can be accumulated up to a limit of three months. (c) Furlough, at the rate of two months for each year of duty, the latter including privilege leave and casual leave. First furlough is not granted till after four years' of duty, and more than eight months furlough is not granted at one time. Study leave may also be granted not exceeding three months at a time and up to nine months during the whole service. (d) Sick leave, up to a maximum of two years. (e) Extraordinary leave at any time at the discretion of the Central Committee. When on furlough or sick leave the allowances are half the average monthly pay of the six months presence on duty immediately preceding the taking of the leave. There are no allowances during extraordinary leave. A Lady appointed in England receives a sum of £70 to cover her passage and incidental expenses. There are also allowances to cover the cost of journeys by rail and road.

There is also to be a Provident Fund, each member contributing monthly thereto five per cent. of her salary, the Association contributing an equal amount, and each subscriber's account being granted interest on the amount standing to credit at the rate of 4 per cent. per annum, "or at such rate as the Central Committee can invest without risk to the funds of the Association."

The Member loses her contributions if she resign (except on account of ill-health) before completing five years' service, or in the event

of dismissal. On retirement after approved service the sum which has accumulated to the credit of the subscriber is handed over to her.

**Lady Hardinge Medical College.**—On February 17, 1916, a medical college for women was opened in Imperial Delhi. The scheme for this College was initiated by the late Lady Hardinge. She took a very keen interest in its development and it is due to her efforts that the greater part of the 22 lakhs needed for its completion was obtained in subscriptions from Indian Princes and Chiefs.

The object of the institution is the training of Indian girls of good class to become doctors. The College and hospital will be staffed entirely by women of good professional requirements and will be chosen from the Women's Medical Service members.

Students joining the college will be required to have passed either the Intermediate Arts or Science Examination of one of the Indian Universities. The College curriculum will include courses in Chemistry, Biology and Physics. University graduates from England have been

appointed as Professors of these subjects. A certain number of scholarships will be awarded annually to deserving students.

**The Lady Hardinge Training School for Nurses.**—Attached to the Hospital which is designed to hold 168 beds will be a training school for nurses and midwives. It is intended to train Indian girls as nurses, who will be available for nursing in private families as well as in hospitals.

The following staff has been selected: Principal and Professor of Medicine, Dr. K. A. Platt, M.D., B.S. (London). Professor of Midwifery and Gynaecology, Miss Holton, M.B., B.S. (London). Professor of Pathology, Miss Field, M.R.C.S., L.R.C.P. Professor of Anatomy, Miss Murphy, M.B. (Calcutta), M.R.C.P. and L.R.C.P. Professor of Physics and Chemistry, Miss A. M. Bain, M.A., B.Sc. (Aberdeen). Professor of Biology and Physiology, Miss M. R. Holmer, (First Class in the Natural Tripos, Cambridge). Superintendent of Nursing, Miss Mackenzie. Tuition began in September.

## THE COUNTESS OF DUFFERIN'S FUND.

The National Association for supplying female medical aid to the women of India at once one of the most efficient as it is among the most useful and benevolent institutions in India, is the outcome of the work of the Countess of Dufferin and Ava during the time of her husband's Viceroyalty. The late Queen Victoria drew the attention of the Countess, on the departure of the latter for India, to the question of supplying medical aid to women in this country, and asked her to take a practical interest in the subject. As the result of her enquiries she found that, though certain great efforts were being made in a few places to provide female attendance in hospitals, training schools, and dispensaries for women, and although missionary effort had done much, and had indeed for many years been sending out pioneers into the field, yet taking India as a whole, its women, owing to the "purdah" system, were undoubtedly without that medical aid which European women were accustomed to consider as absolutely necessary. In the Countess' own words written in 1886 after the movement had been started: "I found that even in cases where nature, if left to herself, would be the best doctor, the ignorant practice of the so-called midwife led to infinite mischief, which might often be characterised as abominably cruel. It seemed to me, then, that if only the people of India could be made to realise that their women have to bear more than their necessary share of human suffering, and that it rests with the men of this country and with the women of other nationalities to relieve them of that unnecessary burden, then surely the men would put their shoulders to the wheel and would determine that wives, mothers, and sisters, and daughters dependent upon them should, in times of sickness and pain, have every relief that human skill and tender nursing could afford them.....I

thought that if an association could be formed which should set before itself this one single object, to bring medical knowledge and medical relief to the women of India, and which should carefully avoid compromising the simplicity of its aim by keeping clear of all controversial subjects and by working in a strictly unsectarian spirit, then it might become national, and ought to command the support and sympathy of every one in the country who has women dependent upon him."

**Initiation of the Scheme.**—Lady Dufferin's plans were warmly received by the public all over India. The scheme was drawn out and published in the different dialects. The association was named "The National Association for Supplying Female Medical Aid to the Women of India," and the money for its support, as it was received, was credited to the "Countess of Dufferin's Fund." The affairs of the Association were managed by a central committee of which the Countess of Dufferin during her stay in India was President. Branch Associations, each independent for financial and administrative purposes, but linked with the central committee, were formed in most parts of the country, and the work may be said to have started from August 1885. The objects of the Association are thus set forth in its publications.—I. Medical tuition, including the teaching and training in India of women as doctors, hospital assistants, nurses, and midwives. II. Medical relief, including the establishing under female superintendence, of dispensaries and hospitals for the treatment of women and children; the opening of female wards under women superintendents in the existing hospitals and dispensaries; the provision of female medical officers and attendants for existing female wards; and the founding of hospitals for women where specially

funds or endowments are forthcoming. III. The supply of trained female nurses and midwives for women, and nurses for children in hospitals and private houses.

Within four years from its inception there were in existence twelve hospitals for women and fifteen dispensaries, most of which were offered by women, and all more or less closely connected with the Association. From the subscriptions collected there was enough to set aside a substantial sum as an endowment fund; and also six medical, twelve nursing and two hospital assistant scholarships had been provided for.

**Growth of Scheme.**—The first regular training school in India for the instruction of native pupils in medical and surgical nursing, and in midwifery was established in 1886 by the Bombay Branch of the Association in connection with the Cama Hospital in Bombay. This is a civil institution under Government management, and is solely for women and children of all castes and denominations. In connection therewith is the Alibless Obstetrical Hospital and the Jaffer Suleiman dispensary for women and children. The present physi-

cian-in-charge is Miss A.M. Benson, M.D., (Lond).

By the end of 1914 there were thirteen Provincial Branches working under the central committee; and attached in some manner, or affiliated to the provincial branches, there were about one hundred and forty Local and District Associations or Committees engaged in furthering the work of the Association. There were one hundred and fifty-eight hospitals, wards, or dispensaries of various kinds for the medical relief of close on one and a quarter million women and children; and the value of the institutions engaged in the work of the Association was estimated at over 56 lakhs of rupees.

**Annual Report.**—The Report of the Association is published annually, and can be obtained either from the Superintendent of Government Printing, Calcutta, or from the leading booksellers, the price being one rupee. The map of India published therewith shows the centres worked by the Dufferin Fund uniformly scattered over the Indian Peninsula, and illustrates how the Association has taken root in the country. The Honorary Secretary is Lt.-Col. Sir James Roberts, I.M.S.

## NURSING.

Whilst India cannot show the complete chain of efficiently-nursed hospitals which exists in England, there has been a great development of skilled nursing of recent years. This activity is principally centred in the Bengal, Madras, and Bombay Presidencies, where the chief hospitals in the Presidency towns are well nursed, and where large private staffs are maintained, available to the general public on payment of a prescribed scale of fees. These hospitals also act as training institutions, and turn out a yearly supply of fully trained nurses, both to meet their own demands and those of outside institutions and private agencies. In this way the supply of trained nurses, English, Anglo-Indian and Indian, is being steadily increased. In Bombay the organisation has gone a step farther, through the establishment of the Bombay Presidency Nursing Association, c/o St. George's Hospital, Bombay. This is composed of representatives of the various Nursing Associations in charge of individual hospitals, and works under the Government. The principle on which the relations of this Association with the Local Associations is governed is that there shall be central examination and control combined with complete individual autonomy in administration.

**Nursing Bodies.**—The Honorary Secretary of the Calcutta Nursing Association is Mr. R. A. B. Reynolds, the Presidency General Hospital. The address of the Mayo Hospital Nursing Association is in Strand Road. In Madras there is the General Hospital, with a staff of 62 nurses, the Government Maternity Hospital, the Caste and Gosha Hospital at Kilpauk, the Royappa Hospital and the Ophthalmic Hospital.

**Bombay Presidency.**—The Bombay Presidency was amongst the first in India to realise the value of nursing in connection with hospital work. The first steps were taken on the initiative of Mr. L. R. W. Forrest at St. George's Hospital, Bombay, where a regular nursing cadre for the hospital was established together with a small staff of nurses for private cases. This was followed by a similar movement at the J. J. and Allied Hospitals and afterwards spread to other hospitals in the Presidency. Ultimately, the Government laid down a definite principle with regard to the financial aid which they would give to such institutions, agreeing to contribute a sum equal to that raised from private sources. Afterwards, as the work grew, it was decided by Government that each nursing association attached to a hospital should have a definite constitution, and consequently these bodies have all been registered as Associations under Act 21 of 1860. By degrees substantial endowments have been built up, although the Associations are still largely dependent upon annual subscriptions towards the maintenance of their work. The chief of these Associations are:—

St. George's Hospital Nursing Association.  
Secretary: D. W. Wilson, St. George's Hospital, Bombay.

J. J. Hospital Nursing Association.  
Secretary: A. G. Gray, Jamsetji Jijibhai Hospital, Bombay.

Gokaldas Tejpal Hospital Nursing Association.  
Secretary: Rahimullah Currimbhoy.

Cama Hospital Nursing Association. Hon. Secretary: H. Macnaghten, Esq.  
Address—Cama Hospital, Bombay.

**Sassoon Hospital Nursing Association.**  
Address—Sassoon Hospital, Poona.

**Ahmedabad and Loly Memorial Association.**  
Address—Civil Surgeon, Ahmedabad.

After further experience it was felt that it is undesirable to have a considerable number of detached and independent nursing associations, training and certifying nurses, without any common standard of entrance, examination, or certification. It was therefore decided to establish the Bombay Presidency Nursing Association which came into existence in the year 1910. This is an Association formed partly of representatives of all affiliated associations and partly of direct representatives of Government, the Surgeon-General with the Government of Bombay always being the chairman. It is financed partly from the product of endowments and partly from contributions from the Government of India. If subsequently further funds are needed they are to be provided by contributions from the affiliated Associations.

The principle on which the Bombay Presidency Nursing Association works is a central system of examination, certification, registration and control. It is now the only nursing, examining, registering and certifying body in the Bombay Presidency. At the same time, the local associations retain entire charge of their local funds excepting Provident funds which have been transferred to the Central fund, and also entire control of the nurses when they are in their employment. In a sentence, the principle is central examination and certification and local control. By degrees it is hoped to be able to establish the principle that none but nurses registered under or certified by this association shall be employed in any Government institution.

The Association commenced its operations on the 1st April 1911. The institutions recognized under the by-laws for the training of nurses at present are—St. George's Hospital, J. J. Hospital, Cama and Allibless Hospitals in Bombay, the Civil Hospital Karachi, the H. and P. Civil Hospital, Ahmedabad, and the Sassoon Hospital in Poona, and the following for the training of midwives:—The Cama and Allibless Hospitals, St. George's Hospital and the Bai Motilal Hospital in Bombay, and the Sassoon Hospital in Poona.

Provision for retiring allowances is made for all members on the basis of a Provident fund and a Nursing Reserve has been established for employment in emergencies such as war, pestilence or public danger or calamity.

Address—The Secretary, Bombay Presidency Nursing Association, c/o Greaves Cotton & Co., Bombay.

**Lady Minto Nursing Service.**—In 1905, there was one organisation existing in the Punjab and the United Provinces called the Up-Country Nursing Association for Europeans in India, which was established in 1892. This Association carried out very useful work in certain parts of India, but was hampered by want of funds. For this reason it was found impossible to extend their organisation and the

urgent need for a larger number of trained nurses at charges within the reach of all classes was much required. The late Lady Curzon worked energetically to provide an enlarged nursing organization, but principally for financial reasons, was unable before leaving India to bring her scheme to fruition. The Home Committee of the existing Association recognizing the need of expansion approached Lady Minto before she left England in 1905 and begged her assistance and co-operation. After much consideration and discussion with the Government of India, Lieutenant-Governors and Commissioners of Provinces, the present Association was established. In 1906 an appeal was made by Lady Minto to the public both in England and India to start an endowment fund. This appeal was most generously responded to. Each year the endowment fund has gradually increased, and with the assistance of a Government grant, homes for nurses have been established in seven Provinces of India and Burma, of which the original Association formed the nucleus. To avoid confusion with other Associations, the enlarged organisation, by request of the Home Committee, was named "Lady Minto's Indian Nursing Association," carrying on the same work as before, namely, that of selecting suitably trained nurses in England, and making the necessary arrangements for their transfer to India. Hon. Secretary, Lieut.-Col. Sir J.R. Roberts, C.I.E., I.M.S., Simla; Hon. Secretary, Home Branch, Lieut.-Col. Sir Warren Crooke-Lawless, Kilrhone, Cloyne, Co. Cork.

**Nurses' Organizations.**—The Trained Nurses' Association of India and the Association of Nursing Superintendents of India are not Associations to employ or to supply nurses, but are organizations with a membership wholly of nurses with the avowed objects of improving and unifying nursing education, promoting *esprit de corps* among nurses, and upholding the dignity and honour of the nursing profession. The Associations have a membership of 202, including nurses trained in ten or more different countries, Europeans, Americans, New Zealanders, Australians and Indians. The Association of Superintendents was started in 1905 as the Association of Nursing Superintendents of the United Provinces and the Punjab, but by the next year its membership had spread over the country to such an extent that the name was changed to include the whole of India. The Trained Nurses' Association was started in 1908, and a monthly Journal of Nursing began to be published by the two Associations in February, 1910. The Associations have since become affiliated with the International Council of Nurses.

Below are given names of Officers of the Associations.—

*Trained Nurses' Association of India.*

*President.* Miss Bartleet, Peach Cottage, Coonoor. *Hon. Secretary and Treasurer.* Miss Thacker, Cama Hospital, Bombay.

*Association of Nursing Superintendents.*

*President.* Miss Dent, Madras; *Hon. Secretary and Treasurer.* Miss Hawkins, Marine Lines War Hospital, Bombay.



## Domestic Servants.

The relationship of master to servant in India is a subject to which attention is frequently directed in the Press by complaints about the alleged deterioration of domestic servants and the hardships to which employers are subjected by the boycotting action of discharged servants. The remedy most commonly propounded for misbehaviour on the part of servants is registration with a view to checking the use of false testimonials, or "chits," and to enabling masters to obtain certain information as to the character of the persons they employ. This mode of procedure is of German origin, for the old Prussian Servants' Ordinances (*Gesindeordnung*) were supplemented in 1854 by a law, applying only to agricultural labourers and domestic servants, which punishes breach of contract, and since then various State laws dealing with domestic servants have been passed in Germany. The conditions are not, however, analogous for the servant keeping class in India is proportionately larger than in Europe, as also is the number of servants kept by each individual.

The first attempt in the East to deal with the problem by legislation was made in Ceylon. The act dealing with the registration of domestic servants in that Colony is comprised in Ordinance No. 28 of 1871. It extends to all classes of domestic servants, hired by the month or receiving monthly wages, and the word "servant" means and includes head and under-servants, female servants, cooks, coachman, horsekeepers and house and garden coolies. The Act came into operation in 1871 and empowered the Governor to appoint for the whole of the Island or for any town or district, to which the Ordinance is made applicable, a registrar of domestic servants, who is to be under the general supervision and control of the Inspector-General of Police. A registry is kept by the registrar of all domestic servants employed within his town or district, and he has to enter therein the names of all the servants, the capacities in which they are employed at the time of such registration, the dates of their several engagements and such memorandum of their previous services or antecedents as they may desire to have recorded in the register. But the registrar must, previous to his entering all these details, satisfy himself as to the credibility of the statements made to him. Any person, who may not have been a domestic servant before, but who is desirous of entering domestic service, has to submit an application to the registrar, and if the registrar is satisfied that there are reasonable grounds to believe that the applicant is a fit and proper person to enter domestic service he shall enter his name in the register, recording what he has been able to learn respecting the person's antecedents together with the names of any persons who are willing to certify as to his respectability. If the applicant is unable to produce satisfactory or sufficient evidence as to his fitness for domestic service the registrar may grant him "provisional" registration, to be thereafter converted into "confirmed" registration according to the result of his subsequent service. If the registrar is satisfied that the applicant is not a fit and proper person he should withhold registration altogether but in such a case he must report his refusal to register to the Inspector-General of Police.

Every person whose name has been registered in the general registry is given a pocket register containing the full particulars of the record made in the general registry. No person can engage a servant who fails to produce his pocket register or whose pocket register does not record the termination of his last previous service, if any. On engaging a servant the master has to enter forthwith in the pocket register the date and capacity in which such servant is engaged and cause the servant to attend personally at the registrar's office to have such entry inserted in the general registry. Similarly, in case the master discharges a servant he must insert in the pocket register the date and cause of his discharge and the character of the servant. Provided that if for any reason he be unwilling to give the servant a character or to state the cause of his discharge he may decline to do so. But in such a case he must furnish to the registrar in writing his reasons for so refusing. If the servant on dismissal fails to produce his pocket register the master must notify that fact to the registrar. Whenever any fresh entry is made in the pocket register the servant is bound to attend the registrar's office to have such an entry recorded in the general registry. Every servant whose name is registered shall, if he subsequently enters service in any place not under the operation of the Ordinance, attend personally at the nearest police station on his entering or leaving such service and produce his pocket register to the principal officer of police at such station in order to enable the police officer to record the commencement or termination of the service. The police officer has then to communicate it to the registrar of the town or district in which such servant was originally registered.

Various penalties of fine as well as of imprisonment are imposed for violation of any of the acts required to be done or duties imposed by the Act on the various persons mentioned below. As respects masters if they fail to fulfil any of the duties imposed on them by the Act they expose themselves to a liability of their being fined to the extent of Rs. 20. Similarly a servant, who fails to fulfil any of the duties imposed on him by the Act is liable to pay a fine not exceeding Rs. 20. But in case he gives any false information to the registrar or to any other person on matters in which he is required by this Ordinance to give information he is liable to a fine not exceeding Rs. 50 or to imprisonment, with or without hard labour, not exceeding 3 months. A fee of 25 cents. is charged to the master on engaging a new servant, a like fee of 25 cents. is charged to the servant on his provisional registration, or on registration being confirmed, or for registration of previous service or antecedents. But in case of loss or destruction of the pocket register the servant has to pay one rupee for the issue of a duplicate pocket register.

A similar Ordinance (No. 17 of 1914) has been introduced in the Straits Settlements, where its operation has been limited to such local areas as may be declared by the Governor in Council, and its application within such areas has been restricted to the class of householders who are expected to desire the benefit of its provisions.

## Indians Abroad.

The Indian is naturally averse from emigration beyond the seas. Nevertheless there are some hundreds of thousands of Indians resident in other lands as labourers, shopkeepers or professional men. Their total number relatively to the population of the Indian Empire is very small being something under two million. In itself, however, it is considerable; and it acquires an extrinsic importance from the social and political issues involved in the settlement of Indians, either as indentured labourers in Crown Colonies, or as free residents in self-governing countries.

**The right to migrate.**—From the Imperial standpoint the case of Indian migration to the self-governing Colonies is much the more important, and for a time the problems arising therefrom became acute. There were two centres of difficulty—South Africa and British Columbia. In each country the situation involved particular local problems of extreme difficulty. But before passing to a discussion of them it is necessary to refer to the larger question of the right of migration within the Empire. The intense feeling aroused in India by the disabilities suffered by Indians in the two countries named was primarily due to the belief that Indians were being denied the common rights of British citizenship. Without attempting to define the term "British citizenship," which is not so easily susceptible of definition as may be imagined, it must suffice to observe that unrestricted migration within the Empire does not appear to be the common right of His Majesty's subjects. The laws of the Dominion of Canada and the Commonwealth of Australia confer powers of exclusion of would-be immigrants hailing from any part of the Empire. These laws have been enforced against Englishmen on various grounds. The ground of exclusion is usually economic, and it is on that ground that the Colonial objection to unrestricted immigration from India operates. It is unfortunately inevitable that the problem assumes in the popular mind a racial complexion. But in actual experience it is the clash of economic interests and the possible political difficulties involved in the settlement of Indians in large numbers in the self-governing Colonies which the statesmen of the Empire have to take into account.

In South Africa the trouble gathered round the disabilities of Indians already settled there. The question of immigration restrictions, though important, held a less prominent place in the agitation. The most acute point of the controversy was the annual £3 head tax in Natal. Restrictions on the migration of Indians from one State of the Union to another was another sore point. The requirement to take out trading licenses was also felt to be a vexatious and invidious distinction between Indian and European traders. While the controversy was at its height, an Act was passed in the Union Parliament, restricting entry into South Africa to the wife or child of a lawful immigrant or resident who was the wife or child of a monogamous marriage. In a case brought before the courts it was decided that the only wife of a marriage solemnised

according to the rites of a religion permitting polygamous marriages could not be admitted. The leaders of the agitation in South Africa adopted passive resistance tactics, which brought large bodies of Indian workmen in Natal into conflict with the police. The situation became acute, and a strong demand arose in India for the appointment of a Government Commission to enquire into the whole question. The Union Government appointed a Commission, and invited the Government of India to send a representative. Sir Benjamin Robertson, Chief Commissioner of the Central Provinces, was selected. The Commission reported on the whole favourably to the Indians.

**The Indians' Relief Act, 1914**, gives effect to those five of the 14 recommendations made by the Commission which necessitated legislation. First by the deletion of certain words from the Immigrants' Regulation Act, 1913, an Indian, married in accordance with the rites of a religion by the tenets whereof polygamy is recognised, is enabled to introduce into the Union one wife as well as her minor children by him, provided the Indian has in the Union no other wife. Another recommendation of the commission to which effect is given is as follows: An Indian man and an Indian woman may, on a joint application to a magistrate or marriage officer, and on complying with certain prescribed formalities, obtain registration of such a union between them as is *de facto* a monogamous union, and such registration will constitute a valid and binding marriage between them with all the incidents thereof, and will be recognised in the Union as such, notwithstanding that, by the tenets of the religion which they profess, polygamous marriages are recognised.

The third recommendation of the Commission to which effect is given is a provision for the appointment of Indian priests as marriage officers under the marriage laws of the several provinces of the Union. So far as Cape Colony is concerned this had been possible, as regards the Mohammedan religion, under Act No. 1 of 1860, while Law No. 19 of 1891 of Natal contained a similar provision. Under the new Act any Indian priest may be appointed a marriage officer for the purpose of the marriage laws of any province of the Union, and a marriage solemnised by him will, if solemnised in accordance with the rites and formularies of his religion and without any prescribed statutory words signifying the binding nature of the ceremony, be recognised as valid.

Another provision provides for the repeal of that section of the Natal Indian Immigration Laws which imposed an annual licence of £3 on Indians who, introduced as indentured labourers, failed to re-indenture at the termination of their contracts.

In British Columbia, the trouble over Indian immigration came to a head in the early part of 1914, when a ship-load of Indians was despatched direct from the Far East to Vancouver. It was held up in the harbour there for several weeks. The passengers were not allowed to land. An appeal to the Cana-

dian courts resulted in the rejection of their claim, and eventually they were shipped back to India. The arrival of the Komagata Maru in Calcutta on September 26, 1914, was the occasion of a most lamentable incident. Anticipating an attempt to organise a political demonstration, the authorities provided special trains to convey the returned immigrants to their homes in the Punjab, and had taken power, under Ordinance V of 1914, to require them to do so; some sixty men immediately proceeded to their homes, but the balance under the leader, Gurdit Singh, endeavoured to force their way to Calcutta. They were turned back by the Military, and whilst arrangements were being made for a second special train, opened fire on the Police and Officials. The Military dispersed the immigrants by fire, and the majority were afterwards arrested. Sgt. Eastwood, Calcutta Police, and Mr. Lomax, of the E. B. S. Railway, were killed; the Punjab Police had one killed and six injured; sixteen rioters were killed, as well as two onlookers. The Government of India appointed a commission under the Presidency of Sir William Vincent to investigate the matter and it took evidence in Calcutta and the Punjab.

There are some 4,000 Indians already settled in British Columbia, chiefly Sikhs. They work as agricultural labourers, in factories and lumber yards, and also on the railways. The desire amongst them to bring their wives and families out from India points to the fact that they are fairly prosperous and find the conditions of life in the Colony agreeable. The attitude of the Colonial authorities towards them is governed by the general objection to Asiatic immigration. It is felt that the unrestricted entry of Asiatics would threaten the existence of British Columbia as a "White man's country." The immigration of Japanese and Chinese is regulated by special treaties with their Governments. The number of Japanese is limited to a few hundreds annually. Chinese immigrants pay a head tax of 500 dollars on entry.

**An exaggerated danger.**—Making every allowance for the Colonial standpoint, those acquainted with the internal condition of India cannot but feel that the fears that the self-governing colonies may be deluged by Indian immigration are greatly exaggerated. The total number of Indians resident out of India is under two millions, and of these the majority are to be found in tropical countries. Ceylon alone has 900,000 of them. There is a quarter of a million in Mauritius, about another quarter of a million in British Guiana and the West Indies, and 230,000 in the Straits Settlements and Malay States. Of the self-governing Colonies South Africa has by far the largest share, her Indian population being a little under 160,000, Natal alone accounting for 133,000. But this is not the result of ordinary migration. The nucleus of the South African Indian community was formed artificially by Natal herself. Until 1911, when it was stopped by the Government of India, there was for many years a steady stream of indentured immigration into Natal to supply labour to the sugar and other industries of that colony. The natural increase of the Indian population in South Africa is now much larger than the

increase by immigration. In the whole Australian Commonwealth there are not more than 7,000 Indians. The Dominion of Canada has 4,500 in all. The significance of these trifling totals must be viewed in the light of the conditions prevailing in India. Here, it is true, there is a vast population. Were these 300 millions subjected to the economic conditions of Europe, and were they imbued by the adventurous and ambitious spirit of Europeans, there would be good ground for alarm in the Colonies at the possibility of an overwhelming influx of Indians. But those are precisely the conditions that do not obtain in the Indian Empire. The demand for labour in India is always greatly in excess of the supply. The tea-planters of Assam are obliged to compete with the Crown Colonies in an elaborate system of coolie recruitment. Labour-shortage is a chronic difficulty with the cotton mills of Bombay. As industrial expansion proceeds and agricultural methods improve, as more land is brought under cultivation, there must be a diminishing likelihood of emigration from India on any large scale. Add to this the inherent reluctance of the Indian to go far from home, and it will be apparent that the danger of "white men's countries" being swamped by Indian immigrants is at the least remote. It is never likely to assume such proportions as would pass the wit of statesmen to control.

**Indentured Emigration.**—The institution of indentured labour in the tropical colonies of the Empire is one of long-standing. As far back as 1864 indentured emigration from India to the British West Indies was in progress under Government control. In the case of several of the tropical colonies there has been no interruption since then in the steady inflow of several thousands of Indian labourers annually. In Mauritius, the Straits Settlements, the Federated Malay States and Natal the system for various reasons has come to an end; but in all those countries there is now a large population of Indians, permanent or temporary, engaged as free labourers or in independent positions. The principal colonies in which indentured emigration still prevails are British Guiana, Trinidad and Fiji. Even here, however, there has been a progressive decline during recent years, owing in part to the increased difficulty of recruiting in India. This difficulty arises entirely from the growing demand for labour within the Indian Empire, consequent upon industrial expansion.

The indentured system has been the subject of much controversy. It is disliked in India and by some people in England, because it seems to present features analogous to slavery—in that for the term of his indenture the labourer is not a free agent; he is *ad scriptus glebæ*, and bound to serve the employer to whom he is assigned on terms which are absolutely fixed. In the colonies themselves the system is unpopular on two grounds—(1) it tends to depress the current rate of wages, (2) only a minority of the time-expired coolies become permanent settlers, the majority claiming their return passage and taking money out of the colony in the form of savings. From the point of view of the labourer himself, the indentured system, if it has any true reason-

blance to slavery, is a kind of bondage that is easily supportable. He is supplied with a free dwelling under highly sanitary conditions, his wages are fixed on the basis of the rate prevailing in the open market; no deductions are to be made therefrom for rent, hospital accommodation, medical attendance or medicine, which the estate proprietors are bound to provide. Free schooling is available for his children; and if, at the end of his indenture, he elects to remain in the Colony he is given a free grant of Government land. These are the conditions prevailing in British Guiana; but, with the exception of the grant of land they are similar to those in other colonies where indentured immigration is in force. The permanent Indian population in British Guiana is 127,000; in Trinidad 118,000, in Fiji 40,000, in Mauritius 253,000 and 113,000 in Natal. Other colonies, such as Jamaica and Dutch Guiana (Surinam) have small communities, amounting in each to a few thousand only of time-expired Indian coolies. Ceylon, the Straits Settlements and the Federated Malay States continue to attract Indian labourers, chiefly from Southern India, although no indenture system now exists in those countries.

The method of recruiting indentured coolies was fully described in the 1916 edition of the Indian Year Book, pp. 467-8.

**Indians in the Colonies.**—Statement showing approximately the number of British Indian subjects in the various colonies.—

Trinidad .. ..	117,100
British Guiana ..	129,389
Jamaica .. ..	20,000
Fiji .. ..	44,220
Surinam .. ..	26,919
Reunion .. ..	3,012
Mauritius .. ..	257,697
Federated Malay States ..	210,000
Straits Settlements ..	.. Figures not available.
Cape Colony .. ..	6,606
Natal .. ..	133,031
Transvaal .. ..	10,048
Orange Free State .. ..	106
Southern Rhodesia ..	.. Figures not available.
Australia .. ..	Do.
New Zealand .. ..	Do.
Canada .. ..	2,500 or 4,500 (the number is uncertain).

**Commission of Inquiry Appointed.**—About the end of 1912, the Government of India appointed a Commission of two, Mr. J. McNeill and Mr. Chiman Lal, to report upon the conditions of life of the Indian immigrants in the Colonies. The Commissioners were also desired to submit recommendations as to any arrangements which may be considered desirable

to promote their welfare. The main points to which they were to direct attention were: the housing of the labourers and the sanitary conditions in which they live; the adequacy of medical arrangements; whether tasks are moderate, hours of work suitable and wages adequate; whether the administration of justice is fairly conducted and whether labourers meet with any difficulties in prosecuting employers or defending themselves; whether the penalties imposed by the labour laws are in any case excessive or unsuitable; whether the labourers are subjected to undue restrictions, outside working hours, and whether they enjoy sufficient facilities for proceeding to the Protector of Immigrants or to the Magistrate to lodge complaints; the relations generally between employers and labourers; whether facilities are afforded to Indian labourers in social and religious matters; and whether repatriations are promptly made and whether immigrants experience any difficulty in obtaining repatriation. They were desired to report specially in respect of certain features of the system. These were connected with any excessive number of prosecutions of labourers by employers, the position of the Protector of Immigrants, the terms of agreement which the immigrant is required to sign; the position of free Indians, female indentured, and suicides and immorality on the estates.

**Merits of the system.**—The Commissioners were engaged in their investigation for about 11 months. They visited Trinidad, British Guiana, Jamaica and Fiji, and also the Dutch Colony of Surinam which is permitted to recruit labourers under contract of indenture in India. Their report is in two parts, Trinidad and British Guiana taking up the first, and the rest the second part. After a detailed exposition of the state of things in respect of the points mentioned above in each of the colonies visited by them, the Commissioners observe: "We are convinced that notwithstanding our possibly disproportionate presentation of the unsatisfactory features of the existing system, a careful study of the facts elicited during our inquiry will result in the conclusion that its advantages have far outweighed its disadvantages. The great majority of emigrants exchanged grinding poverty with practically no hope of betterment for a condition varying from simple but secure comfort to solid prosperity. Emigrants live under very much better conditions than their relatives in India, and have had opportunities of prospering which exceeded their own wildest hopes. They became citizens of the colonies to which they emigrated and both they and their descendants have attained to positions commanding general respect and consideration." As regards the moral condition of the immigrants, the Commissioners observe: "There is no doubt that the morality of an estate population compares very unfavourably with that of an Indian village, and that the trouble originates in the class of women who emigrate." The rates of suicide among the indentured labourers are high as compared with those among free Indians in the colonies, and much higher than those among the population in the provinces of India. In Trinidad the suicide rate for the total Indian population was 134 per million and for the indentured 400 per million. The suicide rates among Indians in the other colonies were: British

Guiana, unindentured, 52 per million, indentured 100 per million; Jamaica, 396 per million, suicides amongst the unindentured not being separately recorded; Dutch Guiana, unindentured, 49, indentured 91; Fiji, unindentured, 147 per million, indentured, 926 per million. According to a statement prepared by the Department of Commerce and Industry of the Government of India, the average suicide rates for India are, the Bombay Presidency 28·8 per million, the United Provinces whence most emigrants are drawn, 63 per million and Madras, the other chief source of supply to Fiji, 45 per million.

**Indian Feeling.**—For some years past, there has been a growing feeling amongst Indian leaders that the indentured system of labour was inconsistent with national self-respect, and should be stopped. This feeling originated in the belief that the treatment accorded to Indians in the self-governing colonies, especially in South Africa, was due to the Colonials coming to think poorly of Indians as a race because of the class represented by indentured labourers. In 1910, the Government of India accepted a resolution moved by the late Mr. Gokhale putting an end to the indentured system so far as Natal was concerned. In 1912, however, they opposed his resolution to abolish the system altogether. Opinion in India has been ripening fast against the system, and it is reinforced by the rapid industrial development of the country making largely increasing demands on the labour market, depleted to some extent by the ravages of plague during the last twenty years. The startling figures of suicide and the admissions as regards the prevalence of gross immorality among estate populations, have roused public feeling in the country, and this has been accentuated by well-authenticated stories of young caste women of respectability having been decoyed by dishonest recruiting agents to the emigration depots. Mr. C. F. Andrews, late of St. Stephens' College, Delhi, and now connected with the school conducted on his own original lines by Sir Rabindranath Tagore—the poet-laureate of Asia, as the Viceroy aptly called him—at Bolpur in the Bengal Presidency, was deputed by the Indian Citizenship Association of Bombay to visit Fiji, and to investigate the conditions which make for the frightful rate of suicide recorded in that colony. He was accompanied by Mr. W. Pearson, who is also associated with the Bolpur School. Messrs. Andrews and Pearson, it may be mentioned, visited South Africa when the Passive Resistance struggle led by Mr. Gandhi was at its height, and rendered valuable service in bringing about the settlement that was eventually arrived at.

**Protected Emigration.**—In a speech delivered in Council on September 5, 1916, H. E. the Viceroy stated that the Government of India were contemplating the control of the operations of persons engaged in supplying labour to the Colonies. "Labourers," said His Excellency, "have a right to emigrate if they wish, and it would be very unwise and very undesirable on our part to prevent them, and we are, therefore, trying to devise arrangements which will secure that recruitment in this country is conducted under decent conditions, that a proper sex ratio will be maintained and that on arrival in the

country of their destination they will be properly treated and allowed to engage themselves on terms at least as free as those obtaining at present in the Malay Peninsula, where a labourer can leave his employer by giving a month's notice. I think it will be clear to all who have studied the question that the Government of India would be departing gravely from its duty if it allowed emigrant labour to leave this country without proper protection and safeguards. There are a certain number of labourers, I believe a very small number, who emigrate as genuine free labourers, that is to say unassisted by pecuniary help and uninvited by any interested agency. But, if we confine ourselves to the abolition of our existing indentured emigration, a position will arise in which the parties interested in procuring Indian labour will be free to induce labour to emigrate by pecuniary help under any conditions they like, so long as the labourer does not go under indenture. The abuses likely to arise out of such a state of things would be very serious. I need only refer to the state of affairs which existed before the amendment of the **Assam Labour and Emigration Act**, in connection with so-called free labour. The consequence of this system was, as Sir Charles Rivaz put it in his speech before the Legislative Council in 1901, that a horde of unlicensed and uncontrolled labour purveyors and recruiters sprang into existence, who under the guise of assisting free emigration made large illicit gains by inducing, under false pretences, ignorant men and women to allow themselves to be conveyed to Assam. These emigrants were, it is true, placed under labour contracts on arriving in that province, but the abuses complained of arose in connection with the recruitment and not with the contract. Similarly when the system of indentured emigration first arose in India the only caution required was that intending emigrants should appear before a magistrate and satisfy him as to their freedom of choice and their knowledge of the conditions they were accepting. It was shown, in a report submitted in 1840, that abuses undoubtedly did exist in connection with recruitment in India, abuses which the constantly increased safeguards provided by successive Acts of the legislature were designed to correct. Uncontrolled recruitment cannot, it is clear, be permitted under any circumstances. Lord Hardinge promised, and I associate myself with him, to deal with certain points. These points were the better supervision of colonial recruiting in India, the insertion of information regarding the penal conditions attaching to labour contracts in the indenture signed by intending emigrants and the undesirability of labourers in the colonies being compelled to do work repellant to their caste ideas and religious beliefs. Regarding the first matter we have already consulted local Governments very fully when asking their views as to the precautions which will be required after the **abolition of indentured emigration**. As to the second point you are no doubt aware that Fiji has now abolished imprisonment for labour offences and other colonies are arranging to follow suit. But there will still be certain provisions remaining which we think should be brought to the notice of intending emigrants and we have arranged to do this as soon as the various colonial legislatures concerned have passed the amendments to which I have alluded."

## Indians in Great Britain.

More than sixty years have gone by since the Parsi community, in the persons of Mr. Dadabhai Naoroji and other members of the firm of Cama and Co., led the way in the residence of Indians in England for business purposes. This lead it has since maintained, though there are both Hindu and Mahomedan business men firmly established there. Nor are the professions unrepresented, for there are in London and elsewhere practising barristers, solicitors and medical men of Indian birth. Two Indians are on the Secretary of State's Council, and at least one successful in the Civil Service examination elected to work in England instead of returning to his native land. The early years of the present century have seen the gathering of a new Indian element in permanent residence—that of retired officials (particularly of the I. M. S.) and business men, or people of independent means who from preference or in order to have their children educated in England, leave the land of their birth and seldom if ever visit it again. Further, the (temporarily greatly diminished by the war) stream of Indian summer visitors includes wealthy people who return as regularly as the swallows in spring, and some of them spend as much time in England or on the Continent as in their mother land. Before the transfer of the Indian troops in France (other than the Cavalry Division) to “another scene of operations” towards the end of 1915, thousands of our valiant Indian soldiers, wounded or invalided from Flanders, have gone to England for the first time in their lives, to be nursed back to health in the well-equipped and admirably administered Indian hospital, some in Hampshire but chiefly at Brighton where the fact is to be commemorated by a permanent Indian provided memorial.

### The Students.

But under normal conditions it is the student community which constitutes the greatly preponderating element and creates an Indian problem. Its numbers have multiplied ten or twelvefold in the last quarter of a century, the increase being especially rapid since 1904 or 1905. There was indeed an artificial inflation some six years ago, when many youths (some of them ill prepared) were hurried off to the Inns of Court in order to be entered before more stringent rules for admission from the overseas dominions came into force. This sudden expansion was duly worked off but there was development in other directions, and particularly that of the technical and engineering schools and classes. Allowing for the very considerable temporary check caused by the European War the aggregate number may be estimated at between 1,100 and 1,200. This total does not include more than a few of the growing number of youths of good family, some of them heirs of Natives State, admitted into our public schools, such as Eton and Harrow; nor the younger children of resident Indians. Nor does it comprehend Burmese students of whom there are about 80. Nor does it take full account of female students in schools and colleges. Exact and complete records, on these points are not obtainable.

It is, however, with the 1,100 or 1,200 young men, almost all far removed from parental oversight and control, that the organization set up by the Secretary of State for India has to deal. Of these on 30th June last 145 were at the Middle Temple, 100 at Lincoln's Inn, 76 at Gray's Inn and 58 at the Inner Temple. Altogether, including technical and medical students, there must be 600 in London. Edinburgh comes next with 160, Cambridge with 100, Oxford with 70, Glasgow with 62, Dublin (a comparatively new centre) with 50 and Manchester with 15, while there are smaller numbers at Birmingham, Leeds, Sheffield, Liverpool and other centres.

### The Information Bureau.

It is well known that until a few years ago the young Indians, apart from inadequately-supported unofficial effort and the chance of coming under the influence of English friends of their families, were practically left to their own devices. But in April 1909 Lord Morley, as a result of the investigations of an India Office Committee, created for their benefit a Bureau of Information and appointed Mr. T. W. Arnold to the charge of it under the title of Educational Adviser. The Bureau was located in due time at 21 Cromwell Road, together with the National Indian Association and the Northbrook Society, which were thus given spacious quarters for their social work among the young men, without incurring what would otherwise have been the prohibitive cost of heavy rent. Lord Morley also established an Advisory Committee, mainly composed of influential Indian residents, and in India corresponding provincial and district committees were formed to help and advise intending students. The work of the Bureau rapidly expanded, and in consequence Lord Crewe in 1912 re-organised the arrangements under the general charge of a Secretary for Indian students, Mr. C. E. Mallet who resigned at the close of 1916. To that time Mr. Arnold, his successor, had continued to look after the London students and to act as guardian when so desired by the parents, local Advisers being appointed at the provincial universities.

Two strange delusions (in some cases they may be called deliberate misrepresentations) have been propagated in reference to these arrangements. One is that the India Office set up the Bureau in order to track down the wave of seditious sentiment which culminated in the assassination of Sir Curzon Wylie six years ago. As a matter of fact the Bureau was established three months before the commission of that crime, and was proposed at least a year previously. The object, as *The Times* observed in September 1908, was not “to put these young men into political leading strings, nor officially to restrict their liberty. It lies in doing all that is possible to facilitate their educational progress and their general welfare, and in bringing them under wholesome and helpful influence.” Mr. Arnold accepted his appointment on the distinct understanding that there would be no espionage; and Mr. Mallet told a gathering of

students in 1913 that it was a complete delusion to regard the Bureau as an instrument of espionage.

### Opening Closed Doors.

It is no less of a delusion for the students to hold, as some of their elder fellow-countrymen have encouraged them to do, that the Bureau is responsible for restrictive rules and regulations of colleges and other institutions, or at any rate for their continuance in spite of protests. The fact of the matter is that in consequence of the wave of disaffection to which reference has been made, and of various practical difficulties arising from the growth in numbers of Indian applicants for admission, many of the universities and other educational institutions had passed restrictive, and in some cases almost prohibitive, regulations affecting Indians when the Bureau came into being. The authorities in question are independent of outside control, and of no department in Whitehall are they more so than of the India Office. The Bureau cannot do more than approach them with requests and suggestions for the benefit of Indians, or with undertakings to afford the sponsorship which in many cases is made a condition of admission.

So far from blocking the way, as hostile observers have alleged, the Bureau has been singularly successful in opening closed doors and mitigating any real grievances. Its greatest triumph is that at Oxford and Cambridge, where naturally the difficulties of admission have been most pronounced, it has paved the way to the creation of University machinery to replace its own operations. The Oriental Delegacy at Oxford and the inter-collegiate Indian Students' Committee at Cambridge have now undertaken all the work hitherto carried on by the Local Advisers, and thus Indian undergraduates are given a welcome *locus standi*. Every element of Government control, so disliked by many of the students, has been eliminated by this practical recognition of the two ancient universities of a special responsibility towards Indians imbibing their culture and traditions. The Secretary of State for India makes grants to these bodies, which are about equivalent to the cost of his former local representatives. The working basis between the new bodies and the Department is one of mutual assistance for the benefit of the students, and familiarity with the conditions is assured by the appointment of the late Local Advisers as the respective secretaries. The new arrangement is the more welcome since strong hopes are entertained that the Rhodes Trustees may see their way to accept the earnest suggestion of Mr. Chamberlain that the Oxford scholarships hitherto allotted to Germans now being revoked with the sanction of Parliament, may be made over, at least in part, to students from India, the only great dominion of the Empire which has had no share in Mr. Rhodes's great benefaction.

Whatever may be done to meet real grievances, these are inherent difficulties in the whole problem; but happily no insuperable obstacles of race arise. Sir T. Morison's Committee on State Technical Scholarships reported in 1913 that the difficulties encountered by young Indians in supplementing academic instruction

by technical experience in factories and workshops are general in character, being also applicable to their English contemporaries, and that there is "on the whole very little evidence of a racial prejudice against Indians." Nor need any youth go to England under misapprehension as to the facilities for his education and their limitations. The excellent "Handbook of Information for Indian students" issued by the National Indian Association and the Advisory Committee, now in its fifteenth edition (1914) supplies all relevant facts and advice; and on personal details, the Indian Advisory Committees can be consulted.

### Persuasion not Coercion.

It is not the case, as some Anglo-Indians of the old type imagine, that the Bureau could easily exercise disciplinary control over all young Indians in London and elsewhere. The fact is that except in respect to holders of Government and some Native State Scholarships it has no disciplinary authority save when parents place their sons under the guardianship of Mr. Arnold or a provincial Adviser, and even in these cases the control can only be exercised in connection with the administration of the regular allowances. The Bureau has had a most beneficial influence in saving scores of young men from falling into debt, intemperance or marital folly, but this has been exercised not coercively but by friendly personal contact and keeping before them the obligation and necessity from every point of view of adhering to the purposes of educational equipment for which they have gone to England.

### Indians and the War.

The removal of misunderstanding and prejudice should be materially promoted by the changed and gratifying conditions brought about by India's magnificent response to the call of Empire in the European War.

In this young Indians in England have had their part. A few promptly enlisted in "Kitchener's Army," being readily admitted on satisfying the usual physical tests. Many others, inspired thereto by Mr. M. K. Gandhi, who was in England on his way from South Africa to India when the war commenced, offered their services unconditionally to the authorities, with the result that an Indian Field Ambulance Corps was organised under the command of Colonel R. J. Baker, late I.M.S. The total enrolled strength of the Corps was 272, of whom altogether 215 were employed at the various Indian hospitals and depots in England, or on the Indian hospital ships. The Corps would have grown still further had not the War Office stopped recruitment in consequence of the ample provision made by the Government of India in the equipment of the medical and ambulance side of the Expeditionary Force. Two members of the Corps received permanent, and 88 of them temporary, commissions in the I. M. S. Meanwhile a committee of students pressed the claims of Indians at the Universities and other educational institutions to be admitted to the Officers Training Corps. The official reply was that this is one of several military questions which can only receive adequate consideration from the military authorities after the conclusion of the war.

## Appointments to the Indian Services.

Full details of the regulations governing appointments to the Indian Services are published in the India Office List. The more essential particulars, except as regards the Civil Service and Police,—of which fuller details are given elsewhere in this book—are given below.

### Indian Agricultural Service.

The appointments in the Indian Agricultural Service include those of Deputy Director of Agriculture, Agricultural Chemist, Economic Botanist, Mycologist, Entomologist, Professors of Agriculture, Chemistry and Botany at Agricultural Colleges, and the like. Some of these are included in the Imperial Department of Agriculture under the direct control of the Government of India, but the majority are included in the Departments of Agriculture of the several provinces of India. In some cases candidates will be appointed direct to these posts, but in most cases they will be appointed as supernumeraries, will undergo a further course of training in India in Indian agriculture, and will be appointed to posts, for which in the opinion of the Government they are considered suitable, on the regular establishment as vacancies occur. Appointments are made by the Secretary of State for India as occasion may require. Candidates must, as a rule, be not less than 23, nor more than 30 years of age. In selecting candidates for appointment, weight will be given to the possession of (a) a University degree in honours in science or the diploma of a recognised school of agriculture or other like distinction; (b) qualifications in a special science according to the nature of the vacancy to be filled; (c) practical experience. Importance is also attached to bodily activity and ability to ride, and selected candidates have to undergo an examination by the Medical Board of the India Office as to their physical fitness for service in India.

The salary attached to posts in the Indian Agricultural Service will ordinarily be:—

	Rs.	
For the first year	.. 400	per mensem.
„ second year	.. 430	„
„ third year	.. 460	„
„ fourth and subsequent years	.. 500	rising by annual increments of Rs. 50 a month to Rs. 1,000 a month.

Candidates who are required to undergo a further course of training in India as explained above will be appointed on this scale of salary, commencing on a pay of Rs. 400. Where, for special reasons, a candidate is recruited for direct appointment to one of the regular posts under paragraph 1, his initial pay will be determined with reference to the special qualifications on the length of European experience required for the appointment for which he is specially selected, but his subsequent increments of salary will be regulated by the foregoing scale. In addition to this scale of pay, officers filling appointments directly under the Government of India, as distinguished from appointments under Local Governments (but not including officers holding supernumerary posts, the post of Inspector-General, or the post of Director of the Pusa Institute) will be eligible for local allowances conditional on approved good work, and the Government reserves to itself the fullest discretion as to granting, withholding, or withdrawing them.

### Indian Civil Veterinary Department.

The officers of the Indian Civil Veterinary Department perform or supervise all official veterinary work in India, other than that of the Army, and are debarred from private professional practice in India. Their duties may be divided into three classes, under the following heads:—

- Educational work in veterinary colleges;
- Horse and mule breeding;
- Cattle disease and cattle breeding.

Appointments to this Department are made, as vacancies occur, by the Secretary of State for India. Candidates must not (except on special grounds to be approved by the Secretary of State) be over 26 years of age, and must

possess a diploma from the Royal College of Veterinary Surgeons. Evidence of a knowledge of bacteriology, and of capacity for carrying out original research, will be specially taken into account in estimating the claims of candidates. Good health, a sound constitution, and active habits are essential, and candidates must be certified by the Medical Board of the India Office to be physically fit for service in India.

Pay will be as follows:—On arrival in India Rs. 500 a month, rising by Rs. 40 each year to Rs. 1,100, which rate will continue from the beginning of the 16th to the end of the 20th year of service; after the beginning of the 21st year Rs. 1,200 a month.

### Ecclesiastical Establishments (Church of England).

Appointments of Chaplains on Probation are made from time to time by the Secretary of State for India, as vacancies occur. Candidates for these appointments must be Priests who are between the ages of twenty-seven and thirty-four years, and have been for three years altogether in Holy Orders. Applications for nominations should be submitted to the Secretary of State.

A Chaplain will be on probation for three years (a); if confirmed in his appointment at the end of that period, he will be admitted as a Junior Chaplain,

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum for five years, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 per annum until promoted to be Senior Chaplains.

Chaplains on Probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after ten years' service, excluding the period of probation.



The retiring pay of Chaplains is regulated by the following scale :—

	Per annum.	£	s.	d.
After 23 years' service, with an actual residence in India of 20 years, including the period of probation .. .. .	365	0	0	

## On Medical Certificate.

£ s. d.

After 18 years' actual residence in India, including the period of probation .. .. .	292	0	0
After 13 years ditto .. .. .	173	7	6
After 10 years ditto .. .. .	127	15	0

## Ecclesiastical Establishments (Church of Scotland).

The appointments of Chaplains of the Church of Scotland on probation are made from time to time by the Secretary of State for India, according as vacancies occur. Candidates for these appointments must have been licensed for three years and be under thirty-four years of age. Applications for nominations should be submitted to the General Assembly's Committee on Indian Churches along with testimonials based on a personal knowledge of the candidate's qualifications. Chaplains will be on probation for three years (a); if confirmed in their appointment at the end of that period, they will be admitted as Junior Chaplains.

The salaries of Chaplains are :—

Senior Chaplains, Rs. 10,200 per annum, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 until promoted to be Senior Chaplains.

Chaplains on probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after 10 years' service, excluding the period of probation.

The retiring pay of Chaplains is regulated by the following scale :—

Per annum. £ s. d.

After 23 years' service, with an actual residence in India of 20 years, including the period of probation .. .. .	365	0	0
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## On Medical Certificate.

After 18 years' actual residence in India, including the period of probation .. .. .	292	0	0
After 13 years' ditto .. .. .	173	7	6
After 10 years' ditto .. .. .	127	15	0

## Educational Appointments.

The Indian Educational Service comprises those posts in the Educational Department to which appointments are made in England by the Secretary of State, and is thus distinguished from the Provincial Educational Services, which are recruited exclusively in India. It consists of two branches, the teaching, including Principalships and Professorships in the various Government Colleges and Head Masterships in certain High Schools; and the inspecting, including Inspectorships of Schools; but officers may be transferred at the discretion of Government from one branch to the other, and the conditions of pay and service are the same for both. It also includes certain special appointments, such as those of Superintendents of Schools of Art, for which special qualifications are required and special terms of engagement are prescribed. Officers of the teaching branch may be required to undertake duties in connection with the supervision of students in hostels or boarding houses, and with the direction of their studies and recreations. Appointments are made by the Secretary of State as occasion may require. Only laymen are eligible, candidates must as a rule be not less than 23, nor more than 30 years of age, but exceptions are sometimes made as regards the maximum limit only. Candidates must be British subjects, and must furnish evidence of having received a liberal education.

In selecting candidates for appointment, weight will be given to the possession of (a) a University degree in Honours, or equivalent distinction; (b) experience as a teacher; (c) qualifications in special subjects, depending on the nature of the vacancy to be filled. In selecting candidates for inspecting appointments, weight is given to linguistic talent, capacity for organisation and knowledge, practical or theoretical, of educational methods.

The salaries paid are as follows :—A newly appointed Inspector or Professor receives Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month. When this point has been reached, the increase of his emoluments depends upon his promotion, and takes the form of allowances ranging from Rs. 200 to Rs. 500, in addition to the salary of Rs. 1,000. There are at present 30 such allowances. There is in every Province a Director of Public Instruction. The posts of Director of Public Instruction are reserved for the Indian Educational Service so long as members of that Service can be found well qualified to fill them. Their pay differs in different Provinces :—

Three receive a salary of Rs. 2,000—100—2,500 a month.

Two receive a salary of Rs. 2,000 a month.

One receives a salary of Rs. 1,750—50—2,000 a month.

Two receive a salary of Rs. 1,500—100—2,000 a month.

One receives a salary of Rs. 1,250 rising to Rs. 1,500 a month.

Head Masters are appointed on an initial pay of Rs. 500, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month, except in cases in which Local Governments may prefer to recruit on the scale of Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 750 a month. Head Masters are eligible for subsequent transfer to Inspectorships or, if qualified, professorships. In all cases, increments of salary are given for approved service only.

For the appointments dealt with above men only are eligible. There are, however, some posts in the Indian Educational Service which are open to women and these comprise appointments as Inspectresses of Girls' Schools, Princi-

pals of Training Colleges, and occasionally Headmistresses of Schools. The salary attached to these appointments is ordinarily Rs. 400 a month, rising by annual increments of Rs. 20 a month to Rs. 500 a month.

The Secretary of State is sometimes requested by the Government of India to supply persons to fill temporary vacancies in the Indian Edu-

cational Service, generally professorships in Colleges. Such appointments are made for not less than a university year (about nine months), with a prospect, in the case of thoroughly approved service, of future selection to fill either a temporary or a permanent appointment. The salary is Rs. 500 a month, rising by annual increments of Rs. 50 a month.

### Indian Forest Service.

The Secretary of State for India in Council makes appointments of Probationers for the Indian Forest Service, according to the numbers annually required.

Candidates must be not less than 19 but under the age of 22 years.

Candidates must have obtained a degree with Honours in some branch of Natural Science in a University of England, Wales or Ireland, or have passed the Final Bachelor of Science Examination in Pure Science in one of the Universities of Scotland. A degree in Applied Science will not be considered as fulfilling these conditions. Candidates will be required to produce evidence that they have a fair knowledge of either German or French.

The ordinary period of probation will be two years. During that time probationers will be required to pass through the Forestry course at one of the following Universities—Oxford, Cambridge or Edinburgh (subject to the arrangement of a suitable course)—becoming members of that University, if not so already; to obtain the Degree or Diploma in Forestry which it grants; and to satisfy such other tests of proficiency as may be deemed necessary.

During the vacations, the Probationers will, under the direction and supervision of the Director of Indian Forest Studies appointed by the Secretary of State for India in Council, receive practical instruction in such British and Continental forests as may be selected for the purpose.

The Secretary of State for India in Council will make payments to each Probationer at the rate of £120 annually, not exceeding a total of £240.

Probationers who obtain a Degree or Diploma in Forestry, and also satisfy such other tests of proficiency as may be prescribed, will be appoint-

ed Assistant Conservators in the Indian Forest Department, provided they are of sound constitution and free from physical defects which would render them unsuitable for employment in the Indian Forest Service.

The sanctioned scale of the service at present is:—

	Rs.	
1 Inspector-General of Forests	2,650 a month.	
1 Assistant Inspector-General of Forests	.....	
2 Chief Conservators (Burma and Central Provinces)	2,150	
22 Conservators, in three grades (including President, Forest Research Institute and College)	1,900 1,700 1,500	Respectively.
187 Deputy and Assistant Conservators	.....	

An Assistant Conservator of Forests will draw pay at the rate of Rs. 380 a month from the date of his reporting his arrival in India rising by annual increments of Rs. 40 a month to Rs. 700 a month, thereafter by annual increments of Rs. 50 a month to Rs. 1,250 a month in the 20th year of service.

After a service of not less than 20 years, a retiring pension is granted not exceeding the following amounts:—

Scale of Pension.		Maximum Limit of Pension.
Years of Completed Service.	Sixtieths of Average Emoluments.	
20 to 24		Rs. 4,000 a year.
25 and above	30	Rs. 5,000 a year.

### Indian Geological Survey.

The Geological Survey Department is at present constituted as follows:—  
Monthly Salary

	Rs.	Rs.	Rs.
1 Director	2,000		
3 Superintendents	1,000 rising by 80	to	1,400
15 Assistant Superintendents—			
For the first five years	350	30	500
Thereafter	500	50	1,000
1 Chemist	500	50	1,000

Appointments to the Department are made by the Secretary of State for India. They will usually be made about July of each year, and the probable number of appointments will, if possible, be announced about two years in advance. The age of candidates should not exceed 25. Besides a good general education, a sound education in geology is essential: a

University degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India. First appointments are probationary for two years,

## India Office.

Vacancies in the clerical establishment of the Secretary of State for India are filled from among the successful candidates at the General Examinations (Class I, and Second Division), which are held from time to time by the Civil Service Commissioners for appointments in the

Home Civil Service. The Examination for Class I. Clerkships is the same as the open Competitive Examination for the Civil Service of India. Further particulars may be obtained upon application to the Secretary, Civil Service Commission, Burlington Gardens, London, W.

## Indian Public Works Department.

The Secretary of State for India in Council makes appointments of Assistant Engineers in the Public Works Department of the Government of India.

Candidates must have attained the age of 21, and not attained the age of 24 years.

Candidates must produce evidence that they have (1) obtained one of the University degrees mentioned in Appendix I, or (2) passed the A.M.I.C.E. examination, or (3) obtained such diploma or other distinction in Engineering as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned.

The Engineer Establishment of the Indian Public Works Department consists of a staff of engineers, military and civil, engaged on the construction and maintenance of the various public works undertaken by the State in India.

2. The permanent establishment of the Department is recruited from the following sources:—

- (1) Officers of Royal Engineers.
- (2) Persons appointed to the Imperial Service by the Secretary of State by selection from the United Kingdom.
- (3) Persons educated at the Government Civil Engineering Colleges in India and appointed to the Provincial Services by the Government of India.
- (4) Occasional admission of other qualified persons.

The increments will be given for approved service only and in accordance with the rules of the Department.

Exchange compensation allowance will not

Promotions above the grade of Executive Engineer are dependent on the occurrence of vacancies in the sanctioned establishment, and is considered to confer no claim to promotion.

3. The various ranks of the department are as follows:—

	Salary per annum (Imperial Service) Rs.
Chief Engineer, First Class .. ..	33,000
" Second Class .. ..	30,000
Superintending Engineer, First Class ..	24,000
" Second Class .. ..	21,000
" Third Class .. ..	18,000
Executive Engineer, 20th year of service and following years .. ..	15,000
Executive Engineer, 19th year of service...	14,400
" 18th .. ..	13,800
" 17th .. ..	13,200
" 16th .. ..	12,600
" 15th .. ..	12,000
" 14th .. ..	11,400
" 13th .. ..	10,800
" 12th .. ..	10,200
" 11th .. ..	9,600
Assistant Engineer, 10th .. ..	9,000
" 9th .. ..	8,400
" 8th .. ..	7,920
" 7th .. ..	7,440
" 6th .. ..	6,960
" 5th .. ..	6,480
" 4th .. ..	6,000
" 3rd .. ..	5,520
" 2nd .. ..	5,040
" 1st .. ..	4,560

## State Railways.

The Secretary of State for India in Council will, from time to time as may be required, make appointments of Assistant Traffic Superintendent on Indian State Railways.

Candidates must possess one or other of the following qualifications, viz. :—

- (a) Not less than two years' practical experience of work in the Traffic Department of a British or Colonial Railway together with evidence of a sound general education.
- (b) A degree or diploma of any teaching University in the United Kingdom granted after not less than three years' study in that University, or a technical

diploma or certificate recognized by the Secretary of State.

The establishment of the Superior Traffic Department of Indian State Railways consists of a staff of officers, military and civil, engaged on the various railways administered by the State in India. This establishment is recruited from the following sources:—

- (i) Officers of Royal Engineers;
- (ii) Persons appointed by the Secretary of State by selection from the United Kingdom;
- (iii) Persons appointed in India.
- (iv) Occasional admission of other qualified persons.

The various ranks of the Department are as follows :—

			Salary per annum. Rs
Traffic Managers .. ..	..	..	24,000
Deputy Traffic Managers .. ..	..	..	18,000
District Superintendents :—			
Class II., Grade 1 .. ..	..	..	13,200
" Grade 2 .. ..	..	..	12,000
" Grade 3 .. ..	..	..	10,800
" Grade 4 .. ..	..	..	9,600
" Grade 5 .. ..	..	..	8,400
Assistant Superintendents :—			
Class III., Grade 1 .. ..	..	..	6,600
" Grade 2 .. ..	..	..	5,400
" Grade 3 .. ..	..	..	4,800
" Grade 4 .. ..	..	..	3,600
" Grade 5 .. ..	..	..	2,400-3,000

The establishments of the Superior Locomotive and Carriage and Wagons Departments of Indian State Railways consist of officers engaged on the various railways administered by the State in India. These establishments are recruited from the following sources :—

- (i) Persons appointed by the Secretary of State by selection from the United Kingdom ;
- (ii) Persons appointed in India ;
- (iii) Occasional admission of other qualified persons.

The various ranks of the Departments are as follows :—

			Salary per annum. Rs.
Locomotive Superintendents .. ..	..	..	24,000
Deputy Locomotive Superintendent .. ..	..	..	18,000
Carriage and Wagon Superintendents .. ..	..	..	18,000 or 21,000
Deputy Carriage and Wagon Superintendents .. ..	..	..	15,000
Both Departments.	District Superintendents :—		
	Class II., Grade 1 .. ..	..	13,200
	" Grade 2 .. ..	..	12,000
	" Grade 3 .. ..	..	10,800
	" Grade 4 .. ..	..	9,600
	" Grade 5 .. ..	..	8,400
	Assistant Superintendents :—		
	Class III., Grade 1 .. ..	..	6,600
	" Grade 2 .. ..	..	5,400
	" Grade 3 .. ..	..	4,800
	" Grade 4 .. ..	..	3,600
	" Grade 5 .. ..	..	2,400-3,000

## Telegraph Department.

There are not at present any vacancies in the Superior Establishment of the Indian Telegraph Department, and it is considered unnecessary for the present to recruit any Assistant Superintendents from the United Kingdom. The arrangements for the future recruiting of the Department have not been finally settled. The various ranks of the superior establishment are as follows :—

Maximum  
Salary  
per  
mensem  
Rs.

Director-General .. ..	..	..	3,000
Deputy Director-General .. ..	..	..	2,000
Directors .. ..	..	..	1,800
Deputy Directors .. ..	..	..	1,600
Chief Superintendents, 1st Class .. ..	..	..	1,400
Chief Superintendents, 2nd class .. ..	..	..	1,250
Superintendents, 1st Grade .. ..	..	..	1,000
" 2nd Grade .. ..	..	..	850
Assistant Superintendents, 1st Grade..	..	..	700
" 2nd Grade .. ..	..	..	550
" 3rd Grade .. ..	..	..	450
" 4th Grade .. ..	..	..	350

## His Majesty's Indian Army.

A certain number of appointments to the Indian Army are offered to Cadets of the Royal Military College, and a certain number to candidates from the Universities. All King's Cadets (British and Indian) and Honorary King's Cadets nominated by the Secretary of State for India in Council have the option, during their last term at the Royal Military College, of electing for appointment to the Unattached List for the Indian Army, or for appointment to commissions in British Cavalry or Infantry. The appointments to the Unattached List for the Indian Army remaining after the claims of the King's Cadets and Honorary King's Cadets (Indian) have been satisfied are allotted in order of merit to Cadets who satisfy the requirements of the Regulations respecting admission to the Royal Military College, and who elect to compete for such appointments, at each final Examination at Sandhurst.

## King's India Cadetships.

Twenty King's India Cadets are nominated each half-year from among the sons of persons who have served in India in the Military or Civil Service of His Majesty or of the East India Company. A Candidate is not eligible for nomination as a King's India Cadet if he be under 17 or over 19½.

A candidate is not eligible for nomination, and his claims will in no circumstances be considered until he (a) has qualified at the Army Entrance Examination; or (b) is prepared to attend the next examination. The fees of King's India Cadets at the Royal Military College are not payable by the State, except in cases where, after due inquiry, their pecuniary circumstances are ascertained to be such as to justify the payment.

## Honorary King's India Cadetships.

Three Honorary King's India Cadets are nominated annually by the Secretary of State for India. Such Cadets are appointed from—

- (a) The sons of officers of the Indian Army, who were killed in action, or who have died of wounds received in action within six

months of such wounds having been received, or from illness brought on by fatigue, privation, or exposure, incident to active operations in the field before an enemy, within six months after their having been first certified to be ill.

(b) The sons of officers of the Indian Army, who have obtained the brevet substantive rank of Major or Lieutenant-Colonel, and have performed long or distinguished service.

An Honorary King's Cadetship carries with it no pecuniary advantage.

### Queen Alexandra's Military Nursing Service for India.

The Nursing establishment is for duty with British officers and soldiers, and at present consists of:—

4 Lady Superintendents.

16 Senior Nursing Sisters.

71 Nursing Sisters.

The numbers in these grades are subject to alteration.

Nursing Sisters at the time of appointment must be over 27 and under 32 years of age. Candidates for the Service must have had at least three years' preliminary training and service combined in the wards of a British general hospital or hospitals of not less than 100 beds in which adult male patients receive medical and surgical treatment, and in which a staff of Nursing Sisters is maintained.

The duration of a term of service, for all grades of lady nurses, is five years. A lady nurse who has been pronounced by a medical Board to be physically fit for further service in India, may be permitted to re-engage for a second and third term at the option of the Government, and again for a fourth term, or until the age of compulsory retirement, if in all respects efficient and if specially recommended by the Commander-in-Chief in India. But a lady nurse will not under any circumstances be permitted to remain in the service in the grade of Lady Superintendent beyond the age of 55 years, or in either of the other grades beyond the age of 50 years.

#### Rates of Pay.

(In addition to free quarters, fuel, light, and punkah-pullers.)

	Rs.	per mensem.
Lady Superintendent ..	300	"
Senior Nursing Sister over five years in grade ..	225	"
Senior Nursing Sister under five years in grade ..	200	"
Nursing Sister over five years in grade ..	200	"
Nursing Sister under five years in grade ..	175	"

### Royal Indian Marine.

All first appointments of executive officers in the Royal Indian Marine are made by the Secretary of State for India.

The limits of age for appointment to the junior executive rank, that of Sub-Lieutenant, are 17 and 22 years, and no candidate will be appointed who does not possess the full ordinary Board of Trade certificate of a Second Mate; certificates for foreign-going *steamships* will not be accepted.

#### PAY AND ALLOWANCES.

The present establishment of officers of the Royal Indian Marine and their allowances are as follows:—

32 Commanders on pay ranging  
from Rs 350 to Rs. 500, in  
addition to staff or command  
pay.

per mensem.

72	Lieutenants on completing eight years' seniority ..	On Rs. 300.
	Lieutenants on completing six years' seniority ..	On Rs. 250.
	Lieutenants on completing three years' seniority ..	On Rs. 200.
	Lieutenants under three years' seniority ..	On Rs. 150.
	Sub-Lieutenants ..	On Rs. 125.
	Sub-Lieutenants ..	On Rs. 100.

Total .. 104.

In addition, 3 Commanders and 8 Lieutenants are at present employed in the Marine Survey of India.

A certain number of Shore, Port, and Marine Survey appointments are usually reserved for officers of the Royal Indian Marine. The numbers so reserved and the allowances attached (in addition to pay of grade), are as follows:—

	Allowances per mensem.
	Rs.
4 Shore appointments ..	400—1000
16 Port appointments ..	320— 870 per diem.
11 Marine Survey appointments ..	4—20

The sanctioned establishment of the Engineers branch of the Marine numbers 82, of whom at present, 10 are Chief Engineers, and the remainder Engineers and Assistant Engineers.



## The Indian Civil Service.

In the early years of the eighteenth century the East India Company was still little more than a body of traders. The genesis of the Indian Civil Service is to be sought in the modifications which the Company underwent as it found itself year by year more involved in the government of the country with which it was trading. It was gradually realised that neither the pay nor the training of the Writers, Factors and Merchants of the Company was adequate to the administrative work which they were called on to perform. As a result this work was often indifferently done, and corruption was rife. To Lord Cornwallis is due the credit of having reorganized the administrative branch of the Company's service, in accordance with **three main principles** from which there has been hitherto no deviation. These were that every civil servant should covenant neither to engage in trade nor to receive presents, that the Company on their side should provide salaries sufficiently handsome to remove the temptation to supplement them by illegitimate means, and that, in order that the best men might be attracted the principal administrative posts under the Council should be reserved for members of the Covenanted Civil Service as it was called. The first of these principles is embodied not only in the covenant which every member of the service still has to sign on appointment, but also in the "Government Servants' Conduct Rules," which are applicable to every civil department, however recruited. As regards the second, the scale of salaries originally prescribed was so handsome that it has not yet been considered expedient to undertake any general revision of it. The list of reserved posts remains, too much the same as in 1793, though certain modifications have been introduced to meet Indian aspirations.

At first nominations to the service were made by the Directors, but this right was withdrawn by Act of Parliament in 1853, and since 1855 appointments have been open to public competition, all natural-born subjects of the Crown being eligible. The age-limits and other conditions of examination have varied considerably from time to time, but at present candidates are examined between the ages of 22 and 24. At first young officers were sent straight to their appointments on recruitment, but in 1800 Lord Wellesley established a college at Fort William for their preliminary training. This was not a success and in 1805 a college at Haileybury was substituted, and for 53 years nominees underwent a two years' training there before proceeding to India. At present a year's course at a British University is prescribed, and at the close of this year there is a further examination. Failure to pass this means final loss of appointment, and seniority in the service is determined by combining the result of the open competition and this final compulsory examination.

The Statute of 1793 (33 Geo. cap. 52) modified in 1861, sets forth the list of **offices reserved** for members of the Indian Civil Service. It

includes among others the offices of secretaries and under-secretaries to governments, commissioners of revenue, Civil and Sessions Judges, Magistrates and Collectors\* of Districts (in the regulation provinces) and joint and assistant Magistrates and Collectors. In the non-regulation provinces, many of the above posts are held by military officers. In addition to these reserved posts there are many other appointments which the Indian Civilian can hold. He is now, however, debarred from permanent appointment as Governor-General or Governor, the highest office he can attain being those of Lieutenant-Governor and Member of the Viceroy's Council.

Despite the complete eligibility of **natives of India**, and despite the numbers of Indians who now seek their education in England, comparatively few have succeeded in obtaining appointments by open competition. On the 1st of April 1913 only 46 of the 1,319 civilians on the cadre were natives of India. In 1870 an important Act (33 Vict. cap. 33) was added to the statute book which allowed the appointment of "natives of India of proved merit and ability" to any of the offices reserved by law to members of the Covenanted Civil Service, such officers were known as Statutory or Uncovenanted Civilians. This method of appointment was dropped in 1889, and facilities were afforded to Indians for promotion through the ranks of the Provincial Service.

The young civilian, on joining his appointment in India, is attached to a district as **assistant to the Collector**. He is given limited magisterial powers, and after passing examinations in the vernacular and in departmental matters he attains to full magisterial powers and holds charge of a revenue subdivision. During this period he is liable to be selected for the judicial branch and become an Assistant Judge. In course of time promotion occurs and he becomes either Collector and District Magistrate, or District and Sessions Judge: this promotion does not generally occur before he has served for at least ten years. The District Judge is the principal civil tribunal of the district and wields extensive appellate powers. In his capacity as Sessions Judge he tries the more important criminal cases of the district.

The **Collector** is not merely chief magistrate and revenue officer of his district. He also forms a court of appeal from subordinate magistrates, supervises municipalities and local boards, is chief excise officer and district registrar, and in general represents Government in the eyes of the people. The Collector and his assistants are expected to travel over their charges; touring rules vary in different provinces, but in Bombay the Collector spends four and his assistants seven months in the year on tour.

By the time the highest grades in the offices of Collector or Judge are reached the Civilian

\* The Chief Revenue Officer of a District is known as the Collector in the "regulation provinces" of Bengal, Madras, Bombay, Agra and Behar and Orissa. Elsewhere he is the Deputy Commissioner, and his assistants are Assistant Commissioners.

has, as a rule, nearly completed the 25 years which are necessary before he can retire. Should he elect to continue in service, there are still posts to which he can look forward for promotion. On the one hand, he may become a Commissioner or even a Member of Council, and on the other, there are Judicial Commissionerships and seats on High Court Benches. Such is the normal career of a Civilian, but this, by no means, completes the account of his prospects, for nearly one-fourth of the service is, as a rule, employed in posts—some reserved and some not—out of the regular line. A number of Civilians are employed in the Imperial and Provincial Secretariats, some are in political employ in the Native States, others hold responsible positions in the Customs, Police, Salt, Post Office and other departments, or supervise big municipalities and public trusts.

The Civilian may retire after 25 years' service and in the ordinary way must retire on reaching the age of 55. He contributes throughout his service to a pension which is fixed, regardless of whether he has risen to be a Lieutenant-Governor, or has remained at the foot of the ladder. Every Civilian, moreover, married or single, subscribes to an annuity fund which provides for the widows and orphans of deceased members of the service.

### Public Services Commission.

In July, 1912, it was announced that the King had been pleased to approve the appointment of a Royal Commission to examine and report upon the Public Services in India. The Royal Commission was constituted as follows:—

**Chairman.**—The Right Hon. Lord Islington, K.C.M.G.

The Earl of Ronaldshay, M.P.

Sir Murray Hammick, K.C.S.I., C.I.E., Indian Civil Service.

Sir Theodore Morison, K.C.I.E., Member of the Council of India.

Sir Valentine Chirol.

Frank George Sly, Esq., C.S.I., Indian Civil Service.

Mahadev Bhaskar Chaula, Esq., C.S.I., Member of the Governor of Bombay's Executive Council.

Gopal Krishna Gokhale, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Walter Culey Madge, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Abdur Rahim, Esq., Judge of the Madras High Court.

James Ramsay MacDonald, Esq., M.P.

Herbert Albert Laurens Fishor, Esq., Fellow and Tutor of New College, Oxford.

**The Terms of Reference were as follows:—**

To examine and report upon the following matters in connexion with the Indian Civil Service, and other civil services, Imperial and Provincial:—

1) The methods of recruitment and the systems of training and probation;

(2) The conditions of service, salary, leave and pension.

(3) Such limitations as still exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial;

and generally to consider the requirements of the Public Service, and to recommend such changes as may seem expedient.

**Work of the Commission.**—The Royal Commission visited India in the cold weather of 1912-13, and toured extensively in India, including Burma, confining their attention mostly to hearing the evidence of and relating to the Indian Civil Service. They subsequently sat in London and in October, 1913, again left for India to enquire into 28 Services other than the Indian Civil and the Provincial Services. They assembled first at Delhi on November 3rd, and examined Imperial officers and witnesses from the United Provinces, the Punjab and the North-West Frontier Province. They then assembled at Calcutta in the middle of December, to hear witnesses from Bengal, Bihar and Orissa, and Burma.

Early in February the Royal Commission went to Madras, and completed the tour at Bombay, where witnesses from Western India and the Central Provinces were heard.

The Commission returned to England in the spring of 1914, and has drawn up a report of which publication has been delayed on account of the war.

### Temporary Provisions.

In October, 1915, a Bill was introduced into the House of Lords, entitled "An Act to enable persons during the continuance of the War, and for a period of two years thereafter, to be appointed or admitted to the Indian Civil Service without examination." The following is the text of its provisions:—“(1) The Secretary of State in Council may with the advice and assistance of the Civil Service Commissioners make rules providing for the admission and appointment to the Indian Civil Service by the Secretary of State in Council, during the continuance of the present war and for a period not exceeding two years thereafter, of British subjects possessing such qualifications with respect to age and otherwise as may be prescribed by the rules, notwithstanding that they have not been certified as being entitled for appointment as the result of examination in accordance with the regulations and rules made under section thirty-two of the Government of India Act, 1858, and section ninety-seven of the Government of India Act, 1915. Provided that—(a) not less than one-fourth of the persons admitted to the Indian Civil Service during such period as aforesaid shall be persons who have been so certified as aforesaid; and (b) a person shall not be appointed to the Indian Civil Service under the rules made under this section unless the Civil Service Commissioners certify that by such means as may be prescribed by the rules they have satisfied themselves that in their opinion he possesses the necessary educational qualifications.

The provisions as to the laying before Parliament of regulations and rules made under



the said sections thirty-two and ninety-seven shall apply to the rules made under this section.

This Act may be cited as the Indian Civil Service (Temporary Provisions) Act, 1915."

In the debate on the second reading of the Bill, Lord Islington explained that this was an emergency Bill introduced to meet the difficulties created by war conditions. Government asked Parliament to authorise the suspension of the statutory system of open competition on two grounds. They wished to prevent any deterioration in the class of officers to be recruited for the I.C.S. and they sought power to provide a method by which those who were fighting at the front should as far as possible be protected from losing their careers as Indian Civil Servants owing to their patriotic action. The Bill sought to secure those ends. Government was anxious that no injustice should be done to Indians and therefore contemplated that, if with the examination of one-fourth there was not as a result the same proportion of Indians successful as had been the case in former years, that number would be made up by selection hereafter. Provision for this was to be included in the rules formulated to give effect to the Bill. In the debate which followed Lord Macdonnell argued that the

process of selection in the case of Indians could be far better carried out in India than in Whitehall. The work, he said, naturally fell within the functions of the Viceroy, who could command the best information as to the relative merits of candidates, and in India where the field of choice would be so much wider. Lord Islington argued in reply that the unsuccessful Indian candidates had a right to be considered. Lord Macdonnell further raised the question of the composition of the Selection Board and moved an amendment under which the board would consist of not more than nine members, including the First Civil Service Commissioner, a member of authority in public affairs, and representatives of the Universities and the public schools. On the suggestion of Lord Sydenham, he added that there should be at least one member with a knowledge of India. By an amended sub-section it has been provided that no person shall be appointed to the I.C.S. unless the Secretary of State, acting with the advice of the Civil Service Commissioners, is satisfied that he possesses the necessary educational qualification. The design is to check any arbitrary use of the powers of the Secretary of State, and to prevent favouritism toward the unfit.

## THE INDIAN MEDICAL SERVICE.

The Medical Service under the control of the Government of India consists of some seven hundred and sixty-eight medical men recruited in England by competitive examination: and has as its primary duty the care of the native troops and of the British Officers and their families, attached to them. But in the course of rather more than a century and a half other duties and responsibilities have accrued to it, so that there are in addition the provision of medical aid to Civil Servants and their families, the administration of the civil hospitals of the large towns, and the supervision of the numerous small dispensaries provided either by the Government or private charity for the inhabitants of the larger villages. Moreover, the Service provides for the sanitary control of large areas, dealing with the sanitation of towns, protection of water supplies and the prevention of epidemic disease. It is also represented in the Native States by the Residency Surgeon, and in Persia by the Medical Officers to the British Consulates. The Jail Department is also administered in great part by Indian Medical Officers, generally in the dual capacity of Medical Officer and Superintendent; and up to quite recently the Officers in the Mints have been recruited from members of the medical profession. Lastly, the Service provides the men who are engaged in original research on diseases of tropical importance at the Bacteriological Laboratories which have arisen in India during the last fifteen years, and others who as Professors at the large medical schools have had the task of creating an indigenous medical profession which will make permanent throughout the Indian Empire the civilising influence of Western Medicine.

This remarkable combination of duties and responsibilities in a single Service has slowly

evolved from the system, initiated in quite early days by the old East India Company, of providing "Chirurgeons" from England, on the nomination of the Board of Directors in London, for the care of the people and soldiers in the Indian "Factories," and on the ships trading with the East. Besides these men the Company maintained several medical services, including those of St. Helena, the West Coast of Sumatra, Prince of Wales Island, and the China Coast. The Surgeons on the Company's Indianmen were frequently utilised for emergent work in India, as in the case of the Mahratta War of 1780 and other military operations of that time, for duty with troops, and sometimes to fill vacancies occurring among those who would now be styled "civil surgeons."

**Organisation.**—The Indian Medical Service practically dates from the year 1764 when the scattered medical officers serving in India were united into one body: later, this was divided into the three medical "Establishments" of Bengal, Madras, and Bombay. In 1766, the Medical Service was divided into two branches, military and civil, the latter being regarded as primarily army medical officers, lent temporarily for civil duties, in which they formed a reserve for the Indian Army, and were consequently liable to recall at any time. This position was confirmed by the Council of Lord Cornwallis in 1788; and has been in existence ever since with great advantage to the military authorities in times of military stress. In 1898, the officers of the Service were given military rank, and since 1906 all the names have been borne on one list, though men on entering the service are allowed to elect a Presidency in which they will serve on entering the Civil Department.

The Service was thrown open to Indians by the India Act of 1853, the first competitive examination being held in January 1855, when the list was headed by a Bengalee student who subsequently attained distinction. It was calculated by Lt.-Col. Crawford, I.M.S., (the talented historian of the Service) that from January 1855 to the end of 1910, eighty-nine men of pure Indian extraction had entered the Service. The proportion now shows signs of yearly increase. The total number of Indians at present in the Service is a little more than five per cent. of the whole: while, of the successful candidates during the past five years, 17·6 per cent. have been men born and bred in the country.

**Method of Entry.**—Entrance into the Service is now determined on the results of competitive examinations held twice a year in London, the Regulations regarding which, and the rates of pay, rules for promotion and pension relating thereto, may be obtained on application to the Military Secretary at the India Office. Candidates must be natural-born subjects of His Majesty, of European or East Indian descent, of sound bodily health, and, in the opinion of the Secretary of State for India in Council, in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess, under the Medical Acts in force at the time of their appointment, a qualification registrable in Great Britain and Ireland. No candidate will be permitted to compete more than three times. Candidates for the January examination in each year must be between 21 and 28 years of age on the 1st February in that year, and candidates for the July examination must be between 21 and 28 years of age on the 1st August.

The candidate will be examined by the Examining Board in the following subjects, and the highest number of marks obtainable will be distributed as follows:—

(1) Medicine, including Therapeutics .. ..	1,200 Marks.
(2) Surgery, including diseases of the eye .. ..	1,200 "
(3) Applied Anatomy and Physiology .. ..	600 "
(4) Pathology and Bacteriology .. ..	900 "
(5) Midwifery and Diseases of Women and Children ..	600 "
(6) Materia Medica, Pharmacology and Toxicology ..	600 "

**N.B.**—The Examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.

Having gained a place at the entrance examination, the successful candidates will be commissioned as Lieutenants on probation, and will be granted about a month's leave. They will then be required to attend two successive courses of two months each at the Royal Army Medical College, and at Aldershot respectively.

Officers appointed to the Indian Medical Service will be placed on one list, their position on it being determined by the combined results of the preliminary and final examinations. They will be liable for military employment in any part of India, but with a view to future transfers to civil employment, they will stand posted to one of the following civil areas:—(1) Madras and Burma, (2) Bombay, with Aden; (3) Upper Provinces, i.e., United Provinces, Punjab and Central Provinces; (4) Lower Provinces, i.e., Bengal, Bihar and Orissa and Assam.

The allocation of officers to these areas of employment will be determined upon a consideration of all the circumstances, including as far as possible the candidate's own wishes.

The whole course lasts for four months, after which the duly gazetted Lieutenants proceed to India, and for the first years of their service are attached to native regiments in any part of the country. The doctor is an officer of the regiment, as was the case in the old days of the Army Medical Department. Of late years it has been proposed to form the members of the Service into a corps on the lines of the British Medical Service, by forming station hospitals for native troops, thereby releasing the doctor from regimental life. This reform appears to have fallen through for the present, but is likely to be brought into operation within a very few years. Several appointments in the Civil Department are now reserved for Indians recruited in the country.

**Organisation.**—The Head of the Service is the Director General, who is an official of the Government of India and its adviser on medical matters. He is also concerned with questions of promotion of officers to administrative rank, and of the selection of men for admission to the civil department. Attached to his office and under his general supervision is the Sanitary Commissioner with the Government of India, who is to have the control of the new Sanitary Service, a department which is undergoing enlargement and re-arrangement. In each Presidency or Province there is a local head of the civil medical service and medical adviser of the local administration, who is either a Surgeon General, or an Inspector of Civil Hospitals of the rank of Colonel. The medical service in each province consists of the Sanitary Branch and the purely professional. The former is composed of Sanitary Commissioners of Districts, who by keeping large tracts of country under observation are in a position to advise their respective governments of the existence of epidemics, and on the proper methods of dealing with them and of preventing their spread. It is, however, through the Civil Surgeon that the visitor to India will come in contact with the Service. This official is something more than a general practitioner, as he is expected to be the leading medical and surgical authority in a large district consisting of a million or more of souls. Owing to the varied experience obtained in India by the members of the Civil Medical Department, this official is generally a man of the highest professional attainments, especially so in the case of those senior men holding appointments in the larger towns. His duties are to give

medical aid to the civil servants and treat families, and to administer the hospital which has been provided by Government in each headquarter town. In many cases too he will have the additional charge of the local jail, and be the Sanitary Adviser of the Municipality. Accustomed to meet the most serious emergencies of his profession, and to rely entirely on his own skill and judgment, the Civil Surgeon in India has given to the Indian Medical Service a reputation for professional efficiency which cannot be excelled by any other public medical service. Travellers in India falling sick within call of any of the larger towns can therefore rely on obtaining the highest professional skill in the shape of the ordinary Civil Surgeon of the I. M. S. There have lately been signs that the popularity of the medical service of India is waning in the medical schools of the United Kingdom, and consequently there is a suspicion that a class of man is now entering it of a somewhat lower type than that which has made the Service famous.

A Parliamentary Paper containing correspondence between the Government of India and the Secretary of State, on the promotion of an independent medical profession in India and the possibility of limiting or reducing the cadre of the Indian Medical Service, was published during 1914. Writing in 1910, the Government of India said that it was impracticable to make any reduction in the number of Indian Medical Service officers employed solely on civil duties, that is to say, those not

belonging to the war reserve. An independent profession trained on western lines was growing up in India but had to overcome its universal rival in the shape of *hakims* and others trained in indigenous methods: Government could do much to encourage the growth of this profession by making provision for the registration of medical practitioners qualified according to western methods. The Secretary of State replying in November 1912, said that he was unable to contemplate any substantial reduction in the Indian Medical Service. As for the independent profession, he trusted that the experience of the working of the Bombay Registration Act might justify the introduction of similar legislation for other Provinces. He considered that the Indian Medical Service should be restricted to the military needs of the country both on account of economy and in order to increase as far as possible the number of important posts held by Indians; he was prepared to consider each new appointment on its merits, but any proposal for an increase in the civil posts included in the cadre of the Indian Medical Service would be subjected to the closest scrutiny. In reply to that despatch, the Government of India wrote in March, 1914:—"In view of the growing medical needs of the country which necessitate the employment of a larger staff of medical officers, some expansion of the Indian Medical Service is inevitable, and such expansion should not, in our opinion, be regarded from a different standpoint from the enlargement of any other cadre in response to the development of the work to be performed."

**Pay and Allowance.**—The following are the monthly rates of Indian pay drawn by officers of the Indian Medical Service when employed on the military side:—

Rank.					Unemployed Pay.	Grade Pay.	Staff Pay.	In Office Medical Charge of a Regiment.	In Permanent Medical Charge of a Regiment.
					Rs.	Rs.	Rs.	Rs.	Rs.
Lieutenant	..	..	..	..	420	350	150	425	500
Captain	..	..	..	..	475	400	150	475	550
.. after 5 years' service	..	..	..	..	475	450	150	525	600
.. after 7 years' service	..	..	..	..	..	500	150	575	650
.. after 10 years' service	..	..	..	..	..	550	150	625	700
Major	..	..	..	..	..	650	150	725	800
.. after 3 years' service as Major	..	..	..	..	..	750	150	825	900
Lieutenant-Colonel	..	..	..	..	..	900	350	1,075	1,250
.. after 25 years' service	..	..	..	..	..	900	400	1,100	1,300
.. specially selected for increased pay.	..	..	..	..	..	1,000	400	1,200	1,400

**Pensions and Half-Pay.**—Officers are allowed to retire on pension on completing 17 years' service, the amount they receive varying with the precise number of years they have served. The lowest rate for 17 years' service is £300 per annum, and the rate for 30 years £700 per annum. The increases in pension for each additional year's service over 17 are somewhat higher in the last 5 than in the first 8 of the 13 years between the shortest and longest periods of pensionable service. All officers of the rank of lieutenant-colonel and major are placed on the retired list on attaining the age of 55 years the greatest age to which any officer can serve being 62.

Principal Civil Appointments.	Approximate Number of Appointments in each Class.	Salary per Mensem.			
		When held by a Lieutenant-Colonel.	When held by a Major.	When held by Captain.	When held by Lieutenant.
		Rs.	Rs.	Rs.	Rs.
Inspectors-General of Civil Hospitals ..	6	2,250-2,500			
Sanitary Commissioner with Government of India	1	2,000-2,500			
Inspectors-General of Prisons .. ..	8	1,500-2,000			
Principals of Medical Colleges .. ..	5	1,650-1,800	1,200-1,300		
Professorial Appointments .. ..	32	1,500-1,650	1,050-1,150	800-950	750
Sanitary Commissioners .. ..	8	1,250-1,800	for all ranks.		
Deputy Sanitary Commissioners .. ..	13	1,450-1,600	1,000-1,100	750-900	700
Bacteriological Appointments .. ..	11	1,500-1,600	1,050-1,150	700-900	650
Superintendents of Central Lunatic Asylums	6	1,400-1,550	1,050-1,150	700-900	650
Superintendents of Central Gaols .. ..	31	1,300-1,550	850-1,050	600-850	550-650
Civil Surgeoncies (First Class) .. ..	37	1,300-1,450	850-950	600-750	550
Civil Surgeoncies (Second Class) .. ..	171	1,200-1,350	750-850	500-650	450
Probationary Chemical Examiner ..	1	....	....	600-750	550
Officers deputed to Plague Duty ..	20	1,450	1,000-1,100	750-900	700

## PUBLIC WORKS DEPARTMENT.

In November, 1916, a committee of inquiry was appointed, under the presidency of Mr. F. G. Sly, I.C.S., to investigate the organisation and system of administration of the Buildings and Roads Branch of the Public Works Department. The Committee is instructed to inquire into the following, among other points:—

(1) Whether the methods at present adopted for the execution of civil works are economical and suitable for the purpose for which they were devised.

(2) Whether under the existing system private enterprise is sufficiently encouraged and whether it is possible and desirable to entrust the construction and upkeep of certain classes of public works to an agency other than departmental, and if so upon what lines such change should be effected.

(3) Whether any changes recommended by the committee necessitate any modification of the organisation of the staff of the Public Works Department, and if so what.

(4) Whether the Public Works Department meets the needs of other departments of administration and whether the relations *inter se* of

the various sub-divisions of the Buildings and Roads Branch,—sanitary, architectural, electrical and civil engineering are satisfactory.

(5) Whether further decentralisation within the Public Works Department itself is desirable, and if so to what extent and in what directions.

(6) Whether the Public Works Department Code, which regulates the execution and maintenance of civil works, is unduly restrictive and if so in what direction a change is desirable.

(7) Whether the system of education in Government engineering colleges is organised on a sufficiently broad basis to meet the needs of private agency, as well as of Government; whether it attracts suitable candidates and whether the standard of instruction is sufficiently advanced to provide fully qualified civil engineers for employment by Government, local bodies, and private engineering and contracting firms, and if not in what directions and to what extent improvement is required.

(8) Whether adequate provision is made for the practical training on works of students who have received their scientific education in English or Indian colleges.

## Pilot Services.

Appointments to the Bengal Pilot Service are made by the Secretary of State for India and by the Government of Bengal; the latter appointments are limited to Anglo-Indians and Eurasians, and are made under separate regulations. In the case of appointments made by the Secretary of State, preference is given, *ceteris paribus*, to candidates who have passed through one of the training ships "Worcester" and "Conway."

Candidates for the Secretary of State's ap-

pointments must not be less than 18 and not more than 22 years of age. They must produce a Board of Trade or Colonial Certificate of Competency as a Second Mate, or any higher grade, for a foreign-going ship, and evidence of having served at sea not less than two years in a square-rigged sailing vessel of over 300 tons. The rates of pay and allowances of Leadsman Apprentices while on duty are as follows, without exchange compensation allowance:—

When on the running list:—

	Rs.
Junior Leadsman ..	..107 a month
Second Mate Leadsman ..	..135 a month
First Mate Leadsman ..	..160 a month

} Plus 50 per cent. of the lead money collected from the ships on which they do duty.

When employed as Chief and Second Officer:—  
Chief Officers of pilot vessels, Rs. 180 a month

As Second Officers of pilot vessels .. Rs. 135 a month.

Plus a mess allowance of Rs. 40 a month.

After five years' service a Leadsman Apprentice is allowed to appear at an examination to qualify him for appointment as Mate Pilot, but if he shows exceptional ability, and has passed each previous examination on his first attempt, bears a very good character, and is otherwise well reported on, this period may, with the special sanction of Government, be reduced to 4½ years. After three years' service as Mate Pilot, he is permitted to go up for an examination to qualify for appointment as Master Pilot, and, if successful, is promoted to that grade on the occurrence of a vacancy. Vacancies which occur in the grade of Branch Pilot are filled by promotion from the Master Pilots' grade, of men who have passed the Branch Pilots' examination. If the Local Government has reason to believe that a Pilot is, owing to physical unfitness of any kind, incapable of discharging his duties properly, it arranges for his medical examination and takes such action as may seem desirable when the results of that examination are communicated. In particular, Pilots are medically examined after the occurrence of any accident to the vessel in their pilotage charge, if the circumstances tend to show that the accident was in any way attributable to physical unfitness on the part of the Pilot.

Pilots are not entitled to any salary while on pilotage duty, but receive as their remuneration a share, at present 50 per cent., but liable to alteration at the discretion of the Government of Bengal, of the pilotage dues paid by ships piloted by them. The Government of Bengal reserves to itself the right to require all Pilots to obtain a Home Trade Master Mariner's Certificate before they are promoted to be Senior Master Pilots. Every member of the Pilot Service is subject to such rules as the Government of India or as the Government of Bengal under the control of the Government of India, may from time to

time, respectively, make in regard to discipline, leave, leave allowances, number of officers in the service, distribution into grades, tonnage of ships to be allotted to the several grades, etc., and in all respects he is amenable to such orders as may be passed by the Government of Bengal, and is liable to degradation, suspension and dismissal by the Government of Bengal for any breach of such rules or orders, or for misconduct.

**Other Pilot Services.**—Bengal is the only province that has a covenanted pilot service: elsewhere pilotage is under the control of the local Port Trust. In Bombay, for example, the Port Trust have drawn up the following rules for entry into the service:

To be eligible for admission to the Bombay Pilot Service, candidates must be British Subjects, and at least 21 years of age but not more than 32. They must hold certificates of competency as Master and excellent testimonials as regards conduct, character and ability. They will be examined in the Port Office for form and colour vision as prescribed by the Board of Trade, and also an extra form vision test of each eye separately and must undergo an examination by, and produce a certificate from, the Medical Officer appointed by the Port Trustees that they are physically fit; and are of a sufficiently hardy or strong constitution to perform a Pilot's duty and that they, to all appearance, enjoy good health. Any Probationer may, with the sanction of the Port Office, go before the Examining Committee, and if he passes he will be eligible for appointment as a 3rd Grade Pilot when a vacancy occurs. A Probationer, not passing the required examination to qualify for performing a Pilot's duties within six months after the date of his appointment, is liable to be struck off the list. Promotion to the various grades in the Pilot service is generally given by seniority, but the Port Trustees reserve to themselves the right of passing over any Pilot. There are 18 Pilots, six in each grade, who are paid according to the number of vessels piloted. The average pay of a 1st Grade Pilot is about Rs. 850, 2nd Grade about Rs. 750 and 3rd Grade about Rs. 650,

## Industrial Commission.

A resolution issued by the Government of India in May, 1916, announced the appointment of a Commission to examine and report upon the possibilities of further industrial development in India and to submit its recommendations with special reference to the following questions:—(a) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated; (b) Whether and if so in what manner Government can usefully give direct encouragement to the industrial development: (1) By rendering technical advice more freely available; (2) by the demonstration of the practical possibility on a commercial scale of particular industries; (3) by affording directly or indirectly financial assistance to industrial enterprises, or (4) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

**Scope of the Inquiry**—A note on the inquiry was issued in September which said.—The scattered information already available regarding the resources of India in raw material, the suitability of the people for expert labour and the probable financial resources of the country, is sufficient to show that there are room and opportunity for a very substantial development of manufacturing and other industries.

It will be the business of the Commission, after establishing this fundamental proposition by a critical analysis of the facts, to suggest the most profitable lines of action with the object.—

- (a) of drawing out capital now lying idle;
- (b) of building up an artisan population;
- (c) of carrying on the scientific and technical researches required to test the known raw materials and to design and improve processes of manufacture;
- (d) of distributing the information obtained from researches and from the results of experience in other countries; and
- (e) of developing the machinery for
  - (1) financing industrial undertakings and
  - (2) marketing products

**Subjects Excluded.**—The original Resolution expressly directed that certain matters should be excluded from consideration. In framing the terms of reference, said the Resolution, it has been found necessary to exclude two matters from the scope of the Commission's labours. In the first place any consideration of the present fiscal policy of the Government of India has been excluded from its enquiries. When introducing the financial statement in the Legislative Council the honourable the Finance Member, it will be remembered, stated in connection with the question of the cotton duties that the general fiscal relationship, which exists between the various parts of the Empire and other countries must in the opinion of His Majesty's Government be reconsidered after the war, and that in the meantime they wish to postpone any action that would tend to raise such questions. The same considerations apply with even greater force to any proposals involving the imposition of duties for the specific purpose of protecting Indian industries, a policy which would very directly affect the fiscal relations of India with the outside world. In the next place it is not proposed that the Commission should re-examine those aspects of technical and industrial education which have recently been dealt with by a committee working in England and India, whose reports are at present under the consideration of the Government of India.

**Personnel.**—The Commission, as originally appointed, consisted of the following gentlemen: President Sir T. H. Holland. Members.—Mr. Chatterton, Sir Fazulbhoy Currimbhoy Ebrahim, Mr. E. Hopkinson, Mr. C. E. Low, C.S., Pandit Madan Mohan Malaviya, Sir R. N. Mukherjee, the Rt. Hon. Sir Horace Plunkett, Mr. F. H. Stewart and Sir D. J. Tata.

Sir Horace Plunkett was unable to serve on account of ill health.

Mr. R. D. Bell, I.C.S., was appointed Secretary of the Commission.

The Commission met in October and proceeded on tour

# The Indian National Congress.

The following record of the early work of the Congress is written by the Hon. Mr. D. E. Wacha:—The Congress was practically founded in 1885 by the late Mr. Allan Octavian Hume, a retired member of the Indian Civil Service, and the son of the distinguished Joseph Hume, M.P., whose radicalism is so well known and who was one of the chief advocates of Retrenchment and Reform in the House of Commons in the forties or fifties. Mr. Hume had a distinguished career in the service. In his younger days when Collector and Magistrate at Etawah, he had rendered invaluable service in quelling the Mutiny in its incipient stage. For this service he was created a Civil Companion of the Bath, a rare honour in those days for a young Anglo-Indian Civil Servant. He retired from the service in 1883 after having honourably filled several high offices, the last of which was the Home Secretaryship of the Government of India. The policy of Lord Lytton's Government (1873-80) had aroused discontent in the country. The imposition of the Vernacular Press Act, commonly known as the Black Act, and the uncalled for hostilities with the Amir Shere Ali of Afghanistan which culminated in the Second Afghan War were the subject of much adverse criticism among the most moderate but enlightened Indians in all parts of the country. It was recognised in all quarters that the people should organise themselves by way of a conference to ventilate their grievances. Correspondence was passing among the Indian leaders of thought in the different provinces as to the formation of such a conference on a sound and permanent footing. The viceroyalty of Lord Ripon (1880-84) gave the necessary stimulus and encouragement. Thus by 1883, when Mr. Hume retired, the idea of the Conference had so far taken body and form that, with the sympathetic support of Mr. Hume, a Union was established after he had in 1883 the genuine support of many sterling friends of India in Parliament, especially John Bright and Mr. Stagg. Mr. Hume had been a silent but watchful observer of events and felt that he must give his active support to the movement, his heart being fully prepared to ameliorate the social, economical and political condition of the Indians. He was in close communication with the leaders in various provinces. Here it may also be worth while recording the fact that during the preliminary stage of the inception of the Congress, Mr. Hume, who had retired to Simla, had had the opportunity of consulting Lord Dufferin on the subject and it is a fact that His Lordship was at one with the object and greatly encouraged Mr. Hume in his mission. Subsequently after 1888 His Lordship, for reasons of his own, which have never been authoritatively declared, chose to assume a hostile attitude towards the organisation but it was effectually met by the speech which Mr. George Yule made in December 1888 at the Congress of Allahabad.

## First Session.

Progress was so far made as to formulate the programme of a first meeting in Poona which at the time was the seat of great political activity. The Christmas week of 1885 was

resolved upon for the inauguration of the Conference. Unfortunately, when the preparations were being made cholera broke out in the City of Poona and it was deemed unsafe to invite delegates there. Accordingly the seat of the first assembly was hurriedly transferred to Bombay under the auspices of the Bombay Presidency Association, with its then active honorary secretaries, Messrs. Pheroze Shah M. Mehta, Kashinath Trimbug Telang and Dinsha Edulji Wacha. It was at the same time resolved to christen it. "The Indian National Congress," having regard to the fact that its principal aim was faithfully to echo the public opinion of all India. So many misleading statements were made during the earliest years of the Congress as to its aims and objects that it may be useful to relate what they are as laid down by Mr. Hume himself in a speech he made at Allahabad in 1888, on the eve of the session of the Fourth Congress at that centre. Firstly, he prefaced his enumeration of the objects by stating that "no movement in modern historical times has ever acquired, in so short a period, such an appreciable hold on the minds of India, none has ever promised such wide reaching and beneficent results." Further on, it was observed that "the Congress movement is only one outcome, though at the moment the most prominent and tangible, of the labours of a body of cultured men, mostly born natives of India, who some years ago banded themselves together to labour silently for the good of India." As to the fundamental principles of the Congress they are:—

*Firstly*, the fusion into one national whole of all the different and discordant elements that constitute the population of India;

*Secondly*, the gradual regeneration along all lines, mental, moral, social and political of the nation thus evolved; and,

*Thirdly*, the consolidation of union between England and India by securing the modification of such of the conditions as may be unjust or injurious to the latter country.

## The Split.

It was on the fundamental principles above stated that the Congress carried out its appointed work midst much misrepresentation, obloquy and even abuse, till 1907 when an extreme faction of delegates deliberately chose to raise a split in the united camp. At the Congress held in Surat in that year the session had to be abandoned owing to the violent outbreak of the factional spirit of those who since have been known as "Extremists," in contrast with the overwhelming majority of those entertaining sober views who are called "Moderates;" but if the proceedings were for the time abandoned, it was not without the leading men immediately organising themselves on the spot to take ways and means for the holding of future congresses and for the purpose of framing a written constitution of which the most important part was the creed of the Congress. In other words, the unwritten aims and objects of the Congress were reduced to

writing in a crystallised form. As such it may be repeated here, as it should dispel all doubts, misgivings or misunderstandings of the true aims and objects of the Congress.

"The objects of the Indian National Congress are the attainment by the people of India of a system of Government similar to that enjoyed by the self-governing members of the British Empire, and a participation by them in the rights and responsibilities of the Empire on equal terms with those members. These objects are to be achieved by constitutional means by bringing about a steady reform of the existing system of administration and by promoting national unity, fostering public spirit and developing and organising the intellectual, moral, economic and industrial resources of the country."

Every delegate to the National Congress is obliged by the Congress Committee of the province from which he is sent to express in writing his acceptances of the above creed and his willingness to abide by the Constitution and the rules framed under it.

This Constitution has been in full working order since 1908. It is unalterable save by a Resolution of a majority in Congress assembled. It provides a guiding or directing staff of chosen leaders selected by each province and annually confirmed from the platform of the Congress by the President, Ex-Presidents, Secretaries and other office-bearers are nominated *ex-officio* members and the whole Committee is known by the name of the All India Congress Committee. The provinces are the same as the territorial divisions of the Government of India. The Committee of each Province is called the Provincial Congress Committee on whom devolves the duty, under the constitution and the rules, of calling meetings for the election of delegates, suggesting subjects to be brought forward for the consideration of the Congress and all cognate matters. The Congress declares each year at the close of the session where the next Congress is to be held. The town or city where it is to be held begins to make all preparations fully six months before the date of the holding of the session which has hitherto invariably been during the three days immediately succeeding Christmas Day. That period is specially selected owing to the great convenience it affords to all classes of delegates in the country to attend—a convenience not offered at any other time during a year. A Reception Committee is formed with a leading person as its Chairman. That Committee divides its work among various sub-committees such as finance, correspondence, housing, feeding and so on. A band of active young persons volunteer to serve the different sub-committees. Formerly they were chiefly selected from among the student class but owing to the orders of Government in the Education Department, that students should take no active part in politics, volunteers are now wholly recruited from the circle of men of business or profession. Apart from the delegates who generally number from 500 as a minimum to 1,000 or so as a maximum there is always a large number of visitors. So that the pendal is erected to contain at least 5,000 seats. There have been some

notable Congresses when the number seated has come to as many as 10,000. That was the number which congregated in Bombay in 1889 when Sir William Wedderburn presided and was accompanied from London by the late Mr. Charles Bradlaugh who afterwards introduced the first Reform Bill of the expanded Legislative Councils in Parliament in 1890. Delegates had had to pay a fee of Rs. 20 for attendance up till 1912, but the fee has since been reduced to Rs. 15. They are charged a very moderate fee for the days they are lodged and boarded. Some well-to-do delegates hire bungalows at their own expense, but the majority of delegates outside those of the province where a Congress is held, generally accept Congress accommodation which in smaller towns becomes a very serious and uphill task indeed.

### British Committee.

It may be observed in conclusion that the Congress has an organisation also in London which is called the British Committee of the Congress. It is furnished with funds provided by the Indian National Congress. It has an establishment of its own and attached to it, though with independent income, an organ of opinion, called "India", which echoes the salient events of what may have happened every week in India. As such it performs useful service. It is well informed and is liberally circulated among members of Parliament who sympathise with Indian aspirations or take interest in the general progress and welfare of India. The Committee consists of retired Anglo-Indians and has been for years presided over by that well-wisher and disinterested friend of India, Sir William Wedderburn, who was twice elected President of the Congress. The Committee invariably invites distinguished or leading Indians when in London to take part in its deliberations. The Committee itself is in constant touch with all proceedings in the House of Commons on Indian affairs and often helps members to put questions when needed. Some years ago it formed a standing committee of members of the House of Commons and an attempt is about to be made to revive it. The Committee also keeps itself in communication with the India Office and often acts as a vehicle of conveying Indian opinion to the Secretary of State. As such the organisation renders valuable service to Indian cause in England. The 1915-16 session held in Bombay under the presidency of Sir S. P. Sinha, one time Law Member of the Viceroy's Executive Council, was largely attended and the proceedings were marked by much enthusiasm. The President, whilst recognising that a reasoned ideal, the self-Government within the Empire, was necessary in order to still the pain in the soul of awakening India, ranked himself with those who saw that the path thither would be long and wearisome. The Congress embodied its political aspirations in the following resolution:—(a) the introduction of Provincial autonomy including financial independence; (b) expansion and reform of the Legislative Councils so as to make them truly and adequately representative of all sections of the people and to give them effective control over the acts of the executive government; (c) the re-construction of the various existing executive councils and



the establishment of similar executive councils in provinces where they do not exist; (d) the reform or the abolition of the Council of the Secretary of State for India; (e) establishment of Legislative Councils in provinces where they do not now exist; (f) the readjustment of the relations between the Secretary of State for India and the Government of India; and (g) a liberal measure of local self-government.

### The Congress Re-United.

For some years following 1907 efforts were made to heal the split and these were without avail until 1916 when a re-united Congress met at Lucknow under the presidency of Babu Ambica Charan Muzumdar of Faridpur in Bengal. At the close of an address the dominating feature of which was the claim of India to self-government the President formulated the Congress programme in the following passage:—

1. India must cease to be a dependency and be raised to the status of a self-governing state as an equal partner with equal rights and responsibilities as an independent unit of the Empire.

2. In any scheme of readjustment after the war, India should have a fair representation in the Federal Council like the colonies of the Empire.

3. India must be governed from Delhi and Simla, and not from Whitehall or Downing Street. The Council of the Secretary of State should be either abolished or its constitution so modified as to admit of substantial Indian representation on it. Of the two Under-Secretaries of State for India one should be an Indian and the salaries of the Secretary of State should be placed on the British estimates as in the case of the Secretary for the Colonies. The Secretary of State for India should, however, have no more powers over the Government of India than those exercised by the Secretary for the Colonies in the case of the dominions. India must have complete autonomy financial, legislative as well as administrative.

4. The Government of India is the most vital point in the proposed reforms. It is the fountain head of all the local administrations and unless we can ensure its progressive character any effective reform of the local governments would be impossible. For this the Services must be completely separated from the State and no member of any service should be a member of the Government. The knowledge and experience of competent members of a service may be utilised in the departments, but they should not be allowed to be members of the Executive Council or the Cabinet of the Government itself.

5. The Executive Government of India should vest in the Governor-General with a number of ministers not less than one-half of whom should be Indians elected by the elected non-official Indian members of the Supreme Legislative Council. These members should hold office for five years. Thus this ministry of the Viceroy will possess the composite character of a parliamentary and non-parliamentary cabinet.

6. The Upper House of Representatives in Canada is composed of 90 members. The

Supreme Legislative Council in India should consist of at least 150 members. These members should be all elected. But for the transitory period one-fifth may be appointed by the Cabinet, not more than one-fourth of whom may be officials.

7. The annual budget should be introduced into the Legislative Council like money Bills, and except the military estimates the entire Budget should be subject to the vote of the Council.

8. The Provincial Governments should be perfectly autonomous, each Province developing and enjoying its own resources, subject only to a contribution towards the maintenance, of the Supreme Government.

9. A Provincial administration should be vested, as in the case of the Supreme Government, in a Governor with a Cabinet not less than one-half of whom should be Indians elected by the non-official elected Indian members of its Legislative Council.

10. The Provincial Legislative Council should in the case of a major province consist of 100 members and in the case of a minor province 75 members all of whom should be elected by the people and each district must have at least one representative of its own. For the transitory period there should of course be the same conditions and restrictions as in the case of the Supreme Legislative Council.

11. As the executive and the legislative functions are to be separated so there must be complete separation of the judicial from the executive functions of the State. The judicial administration whether civil or criminal, should be wholly vested in the High Courts both as regards control as well as the pay, prospect and promotion of its officers. The High Courts should be subordinate only to the Supreme Government.

12. The Arms Act should be repealed or so modified as to place the Indians exactly on the same footing with the Europeans and Eurasians. The Press Act should be removed from the Statute Book and all the repressive measures withdrawn.

13. India should have a national militia to which all the races should be eligible under proper safeguards and they should be allowed to volunteer themselves under such conditions as may be found necessary for the maintenance of efficiency and discipline. The Commissioned ranks in the army should be thrown open to his Majesty's Indian subjects.

14. A full measure of local self-government should be immediately granted throughout the country and the Corporations of the Presidency towns the District and the Taluk boards and the district municipal corporations should be made perfectly self-governing bodies with elected members and elected chairmen of their own. They should be freed from all official control except such as may be legally exercised by the Government direct.

15. Mass education should be made free and compulsory. Suitable provisions should also be made for the development and encouragement of indigenous industries.

## The Moslem League.

The Indian Moslem League was established in 1906. Prior to that time the Indian Moslems had stood aloof from politics. Acting under the guidance of the greatest man they have produced, **Sir Syed Ahmad**, they devoted their attention to education, founding the Aligarh College with the special purpose of making up the leeway of Mahomedans in education, and left politics to the other Indian peoples. A few Mahomedans joined the National Congress and took part in its annual sessions; but the community as a whole stood aside from political movements.

In 1906 however changes occurred which impelled Indian Moslems to action. Under the Act of 1892, constituting the Indian Legislative Councils, there was no specific Moslem representation and in the elections which had taken place under that Act the Moslems had for all practical purposes failed to find selection. Therefore, when the amendment of the Act and the extension of the representative principle were under discussion, they were stirred to action. They feared lest, under an academic system, adapted only to a homogeneous people, their distinct communal interests would either secure no representation at all, or only inadequate representation. They therefore took counsel together and approached the Viceroy in deputation, headed by His Highness the Aga Khan, and presented their views in an important State paper. In this they laid stress on their position in the following passage:—

“Representative institutions of the European type are new to the Indian people—many of the most thoughtful members of our community, in fact, consider that the greatest care, forethought, and caution will be necessary if they are to be successfully adapted to the social, religious and political conditions obtaining in India—and that in the absence of such care and caution their adoption is likely, amongst other evils, to place our national interests at the disposal of an unsympathetic majority.”

Feeling that the Mahomedans were a distinct community, and that their interests had suffered because they had been under-represented, the deputation asked for representation on a communal basis, and for representation in excess of their actual numerical strength or account of the peculiar and historical position of the Moslem community. This request was accepted, and the Imperial and Provincial Councils embodied the principle of Mahomedan representation on a communal basis.

### First Constitution.

It was felt that in view of the changed conditions the Moslems should organise their own political society for the expression of their communal policy. This was the origin of the Moslem League. The rules and regulations of the League provided for a constitution, with provincial branches, and defined the objects of the League in the following language:—

The objects of the League shall be:—

(a) to promote among Indian Mussalmans feelings of loyalty towards the British Government, and to remove any misconception

that may arise as to the intentions of Government with regard to any of its measures;

(b) to protect the political and other rights and interests of Indian Mussalmans and to place their needs and aspirations before the Government in temperate language;

(c) without prejudice to the objects mentioned under (a) and (b) of this section, to promote so far as possible concord and harmony between the Mussalmans and other communities of India.

### Revised Constitution.

In 1912 and 1913 Moslem opinion as expressed by the League underwent a certain change. First at a meeting of the Council, afterwards at the annual session which was held at Lucknow, the constitution was amended so as to include in the objects of the League the attainment of a system of **self-government** in India under the Crown. The objects of the League, as defined in the most recent publication, are thus set forth:—

The objects of the League shall be:—

(a) to maintain and promote among the people of this country feelings of loyalty towards the British Crown;

(b) to protect and advance the political and other rights and interests of the Indian Mussalmans;

(c) to promote friendship and union between the Mussalmans and other communities of India;

(d) without detriment to the foregoing objects, attainment, under the aegis of the British Crown, of a system of self-government suitable to India, through constitutional means, by bringing about, amongst others, a steady reform of the existing system of administration, by promoting national unity, by fostering public spirit among the people of India and by co-operating with other communities for the said purposes.

This change in the constitution of the League produced much discussion and was opposed by many of the older men who had led the community.

### London Branch.

There is a branch of the Moslem League in London, of which the Right Hon. Syed Amir Ali is President. In the autumn of 1913 the London office bearers resigned, as the result of differences of opinion with two Indian Moslems who were visiting England, Mr. Mahomed Ali and Mr. Vazier Khan, the honorary secretary of the League. Syed Amir Ali thus described the nature of these differences: “an endeavour to capture the organisation here and to impose on it their own will. To both of these attempts I was, in the interests of the Mussalman community, bound to take strong objection.” In response to strong pressure from the Provincial Leagues in India, the London office bearers resumed their posts and the London Branch of the League continues under the former personnel.

The headquarters of the League are at Lucknow.

**Hindu-Mahomedan Entente.**—The 1916-17 session of the Moslem League was held at Lucknow immediately after the session of the Congress, and at each of those two sessions references were made to the fact that the two organisations were rapidly converging. The President of the Congress (Mr. Ambika Charan Murumdar) in his address said: "The Hindu-Moslem question has been settled and the Hindus and Mussalmans have agreed to make a united demand for self-government. The All-India Congress Committee and the representatives of the Moslem League who recently met in conference at Calcutta have after two days' deliberations in one voice resolved to make a joint demand for a Representative Government in India. There are little differences on one or two minor points of detail but they count for nothing. The vital issue has been solved and the main point has been gained."

The President of the All-India Moslem League (Mr. M. A. Jinnah) in his address said: "In its general outlook and ideal as regards the future, the All-India Moslem League stands abreast of the Indian National Congress and is ready to participate in any patriotic efforts for the advancement of the country as a whole. In fact this readiness of the educated Moslems, only about a decade after they first entered the field of politics, to work shoulder to shoulder with the other Indian communities for the common good of all is to my mind the strongest proof of the value and need of the separate Moslem political organisation at present. I have been a staunch Congressman throughout my public life and have been no lover of sectarian cries, but it appears to me that the reproach of "separatism" sometimes levelled at Mussalmans, is singularly inapt and wide of the mark when I see this great communal organisation rapidly growing into a powerful factor for the birth of United India. A minority must, above

everything else, have a complete sense of security before its broader political sense can be evoked for co-operation and united endeavour in the National tasks. To the Mussalmans of India the security can only come through adequate and effective safeguards as regards their political existence as a community."

**What the League stands for.**—The attitude of the League was defined as follows by the President of the Reception Committee (Mr. Nabijullah): "The All-Indian Moslem League stands to-day for two principal objects, namely, for the safe-guarding of the political position of Mussalmans and for co-operation with the other communities for the attainment of self-government. The realisation of the first object is, as all fair minded persons would be ready to admit, an essential condition of the success of the second. It would be idle to talk of co-operation if the Mussalmans did not feel a complete sense of security as regards their communal future. They are a "minority" and in all political developments a minority must have certain definite safeguards. The Moslem demand for such safeguards is, therefore, natural and legitimate and the "majority" which in any case holds the balance of power, cannot oppose this demand without laying itself open to the charge of selfishness and political insincerity. Let our Hindu brothers remember that an adequate and effective separate representation of Mussalmans in self-governing institutions can in no case deprive them of the decisive power of the majority. When such power is guaranteed to them by their number I fail to see why some of their communal enthusiasts should deny to Mussalmans the right to secure their political existence. Opposition of this character breeds distrust and the good faith of those who base such opposition on grounds of unity and nationalism comes to be questioned by Moslem rank and file."

## SUGGESTED POST-WAR REFORMS.

The following scheme of post-war reforms was prepared by the All-India Congress Committee in conjunction with the Reform Committee of the All-India Moslem League in 1916:—

### I.—Provincial Legislative Councils.

1. Provincial Legislative Councils shall consist of four-fifths elected and of one-fifth nominated members.

2. Their strength shall be not less than 125 members in the major provinces, and from 50 to 75 in the minor provinces.

3. The members of Councils should be elected directly by people on as broad a franchise as possible.

4. Adequate provision should be made for the representation of important minorities by election, and that the Mahomedans should be represented through special electorates on the Provincial Legislative Councils.

Provided that Mahomedans should not participate in any of the other elections to the Legislative Councils.

5. The head of the Provincial Government should not be the President of the Legislative Council but the Council should have the right of electing its President.

6. The right of asking supplementary questions should not be restricted to the member putting the original question, but should be allowed to be exercised by any other member.

7 (a) Except customs, post, telegraph, mint, salt, opium, railways, army and navy, and tributes from Indian States, all other sources of revenue should be provincial.

(b) There should be no divided heads of revenue. The Government of India should be provided with fixed contributions from the Provincial Governments, such fixed contributions being liable to revision when extraordinary and unforeseen contingencies render such revision necessary.

(c) The Provincial Council should have full authority to deal with all matters affecting the internal administration of the Province including the power to raise loans, to impose and alter taxation, and to vote on the Budget. All items of expenditure, and all proposals concern-

ing ways and means for raising the necessary revenue, should be embodied in Bills and submitted to the Provincial Council for adoption.

(d) Resolutions on all matters within the purview of the Provincial Government should be allowed for discussion in accordance with rules made in that behalf by the Council itself.

(e) A resolution passed by the Legislative Council shall be binding on the Executive Government, unless vetoed by the Governor in Council, provided however that if the resolution is again passed by the Council after an interval of not less than one year, it must be given effect to.

(f) A motion for adjournment may be brought forward for the discussion of a definite matter of urgent public importance if supported by not less than one-eighth of the members present.

8. Any special meeting of the Council may be summoned on a requisition by not less than one-eighth of the members.

9. A Bill, other than a Money Bill, may be introduced in Council in accordance with the rules made in that behalf by the Council itself and the consent of the Government should not be required therefor.

10. All Bills passed by Provincial Legislatures shall have to receive the assent of the Governor before they become law, but may be vetoed by the Governor-General.

11. The term of office of the members shall be five years.

## II.—Provincial Government.

1. The head of every Provincial Government shall be a Governor who shall not ordinarily belong to the Indian Civil Service or any of the permanent services.

2. There shall be in every Province an Executive Council which, with the Governor, shall constitute the Executive Government of the Province.

3. Members of the Indian Civil Service shall not ordinarily be appointed to the Executive Councils.

4. Not less than one-half of the members of Executive Council shall consist of Indians to be elected by the elected members of the Provincial Legislative Council.

5. The term of office of the members shall be five years.

## III.—Imperial Legislative Council.

1. The strength of the Imperial Legislative Council shall be 150.

2. Four-fifths of the members shall be elected.

3. The franchise for the Imperial Legislative Council should be widened as far as possible on the lines of the Mahomedan electorates and the elected members of the Provincial Legislative Councils should also form an electorate for the return of Members to the Imperial Legislative Council.

5. The President of the Council shall be elected by the Council itself.

6. The right of asking supplementary questions shall not be restricted to the member

putting the original question but should be allowed to be exercised by any other member.

7. Any special meeting of the Council may be summoned on a requisition by not less than one-eighth of the members.

8. A Bill, other than a Money Bill, may be introduced in Council in accordance with rules made in that behalf by the Council itself, and the consent of the Executive Government should not be required therefor.

9. All Bills passed by the Council shall have to receive the assent of the Governor-General before they become law.

10. All financial proposals relating to sources of income and items of expenditure shall be embodied in Bills. Every such Bill and the Budget as a whole shall be submitted for the vote of the Imperial Legislative Council.

11. The term of office of members shall be five years.

12. The matters mentioned herein below shall be exclusively under the control of the Imperial Legislative Council:—

(a) Matters in regard to which uniform legislation for the whole of India is desirable.

(b) Provincial legislation in so far as it may affect inter-provincial fiscal relations.

(c) Questions affecting purely Imperial Revenue, excepting tributes from Indian States.

(d) Questions affecting purely Imperial expenditure, except that no resolution of the Imperial Legislative Council shall be binding on the Governor-General in Council in respect of Military charges for the defence of the country.

(e) The right of revising Indian tariffs and customs duties, of imposing, altering, or removing any tax or cess, modifying the existing system of currency and banking and granting any aids or bounties to any or all deserving and nascent industries of the country.

(f) Resolutions on all matters relating to the administration of the country as a whole.

13. A Resolution passed by the Legislative Council should be binding on the Executive Government, unless vetoed by the Governor-General in Council; provided however that if the Resolution is again passed by the Council after an interval of not less than one year, it must be given effect to.

14. A motion for adjournment may be brought forward for the discussion of a definite matter of urgent public importance, if supported by not less than one-eighth of the members present.

15. The Crown may exercise its power of veto in regard to a Bill Passed by a Provincial Legislative Council or by the Imperial Legislative Council within twelve months from the date on which it is passed, and the Bill shall cease to have effect as from the date on which the fact of such veto is made known to the Legislative Council concerned.

16. The Imperial Legislative Council shall have no power to interfere with the Government of India's direction of the military affairs and the foreign political relations of India, including

the declaration of war, the making of peace and the entering into treaties.

#### IV.—The Government of India.

1. The Governor-General of India will be the head of the Government of India.

2. He will have an Executive Council half of whom shall be Indians.

3. The Indian members should be elected by the elected members of the Imperial Legislative Council.

4. Members of the Indian Civil Service shall not ordinarily be appointed to the Executive Council of the Governor-General.

5. The power of making all appointments in the Imperial Civil Services shall vest in the Government of India as constituted under this scheme, and subject to any laws that may be made by the Imperial Legislative Council.

6. The Government of India shall not ordinarily interfere in the local affairs of a province, and powers not specifically given to a Provincial Government shall be deemed to be vested in the former. The authority of the Government of India will ordinarily be limited to general supervision and superintendence over the Provincial Governments.

7. In legislative and administrative matters the Government of India as constituted under this scheme shall, as far as possible, be independent of the Secretary of State.

8. A system of independent audit of the accounts of the Government of India should be instituted.

#### V.—The Secretary of State in Council

1. The Council of the Secretary of State for India should be abolished.

2. The salary of the Secretary of State should be placed on the British Estimates.

3. The Secretary of State should, as far as possible, occupy the same position in relation to the Government of India, as the Secretary of State for the Colonies in relation to the Governments of the self-governing dominions.

4. The Secretary of State for India should be assisted by two Permanent Under-Secretaries, one of whom should always be an Indian.

#### VI—Military and other matters of policy.

1. The military and naval services of His Majesty, both in their commissioned and non-commissioned ranks, should be thrown open to Indians and adequate provision should be made for their selection, training and instruction in India.

2. Indians should be allowed to enlist as volunteers.

3. Indians should be placed on a footing of equality in respect of status and rights of citizenship with other subjects of His Majesty the King throughout the Empire.

4. The Executive Officers in India shall have no judicial powers entrusted to them and the judiciary in every Province shall be placed under the highest Court of that Province.

N. B.—As regards communal representation in Legislative Councils the following percentages have been agreed upon:

Mahomedan representation for the Punjab 50 per cent., Bengal 40 per cent., Bombay 33½ per cent., U. P. 30 per cent., C. P. 15 per cent., Madras 15 per cent. It has also been agreed to that if in any province two-thirds of a community be against any measure or Bill it should be dropped by both communities.

## The Press.

The newspaper Press in India is an essentially English institution and was introduced soon after the task of organising the administration was seriously taken in hand by the English in Bengal. In 1773 was passed the Regulating Act creating the Governor-Generalship and the Supreme Court in Bengal and within seven years at the end of the same decade, the first newspaper was started in Calcutta by an Englishman in January 1780. Exactly a century and a third has elapsed since, not a very long period certainly, a period almost measured by the life of a single newspaper, *The Times*, which came into existence only five years later in 1785; but then the period of British supremacy is not much longer, having commenced at Plassey, only twenty-three years earlier. Bombay followed Calcutta closely, and Madras did not lag much behind. In 1789 the first Bombay newspaper appeared, *The Bombay Herald*, followed next year by *The Bombay Courier*, a paper now represented by the *Times of India* with which it was amalgamated in 1861. In Bombay the advent of the press may be said to have followed the British occupation of the island much later than was the case in Calcutta. In Calcutta the English were on suzerainty before Plassey, but in Bombay they were absolute masters after 1665, and it is somewhat strange that no Englishman should have thought of starting a newspaper during all those hundred and twenty-five years before the actual advent of *The Herald*.

The first newspaper was called *The Bengal Gazette* which is better known from the name of its founder as *Hicky's Gazette or Journal*. Hicky like most pioneers had to suffer for his enterprising spirit, though the fault was entirely his own, as he made his paper a medium of publishing gross scandal, and he and his journal disappeared from public view in 1782. Several journals rapidly followed Hicky's, though they did not fortunately copy its bad example. *The Indian Gazette* had a career of over half a century, when in 1833 it was merged into the *Bengal Harkara*, which came into existence only a little later, and both are now represented by *The Indian Daily News* with which they were amalgamated in 1866. No fewer than five papers followed in as many years, the *Bengal Gazette* of 1780, and one of these, *The Calcutta Gazette*, started in February 1784, under the avowed patronage of Government, flourishes still as the official gazette of the Bengal Government.

From its commencement the press was jealously watched by the authorities, who put serious restraints upon its independence and pursued a policy of discouragement and rigorous control. Government objected to news of apparently the most trivial character affecting its servants. From 1791 to 1799 several editors were deported to Europe without trial and on short notice, whilst several more were censured and had to apologise. At the commencement of the rule of Wellesley, Government promulgated stringent rules for the public press and instituted an official censor to whom everything was to be submitted before publication, the penalty for offending against these rules to be immediate deportation. These

regulations continued in force till the time of the Marquis of Hastings who in 1818 abolished the censorship and substituted milder rules.

This change proved beneficial to the status of the press, for henceforward self-respecting and able men began slowly but steadily to join the ranks of journalism, which had till then been considered a low profession. Sir Buckle, one of the ablest and best known of Anglo-Indian journalists of those days, availed himself of this comparative freedom to criticise the authorities, and under the short administration of Adam, a civilian who temporarily occupied Hastings's place, he was deported under rules specially passed. But Lord Amherst and still more Lord William Bentinck were persons of broad and liberal views, and under them the press was left practically free, though there existed certain regulations which were not enforced, though Lord Clare, who was Governor of Bombay from 1831 to 1835, once strongly but in vain urged the latter to enforce them. Metcalfe who succeeded for a brief period Bentinck, removed even these regulations, and brought about what is called the emancipation of the press in India in 1835, which was the beginning of a new era in the history of the Indian press. Among papers that came into being, was the *Bombay Times* which was started towards the close of 1838 by the leading merchants of Bombay, and which in 1861 changed its name to the *Times of India*. *The Bombay Gazette*, founded in 1791, ceased publication in 1914.

The liberal spirit in which Lord Hastings had begun to deal with the press led not only to the improvement in the tone and status of the Anglo-Indian press, but also to the rise of the Native or Indian Press. The first newspaper in any Indian language was the *Samachar Durpan* started by the famous Serampore Missionaries Ward, Carey and Marshman in 1818 in Bengali, and it received encouragement from Hastings who allowed it to circulate through the post office at one-fourth the usual rates. This was followed in 1822 by a purely native paper in Bombay called the *Bombay Samachar* which still exists, and thus was laid the foundation of the Native Indian Press which at the present day is by far the largest part of the press in India, numbering over 650 papers.

From 1835 to the Mutiny the press spread to other cities like Delhi, Agra, Gwalior, and even Lahore, whereas formerly it was chiefly confined to the Presidency towns. During the Mutiny its freedom had to be temporarily controlled by the Gagging Act which Canning passed in June 1857 on account of the license of a very few papers, and owing still more to the fears of its circulating intelligence which might be prejudicial to public interests. The Act was passed only for a year at the end of which the press was once more free.

On India passing to the Crown in 1858, an era of prosperity and progress opened for the whole country in which the press participated. There were 19 Anglo-Indian papers at the beginning of this period in 1858 and 25 Native papers and the circulation of all was very small. The number of the former did not show a great rise in the next generation, but the rise in the

finance and also circulation was satisfactory. Famous journalists like Robert Knight, James Maclean and Hurris Mookerji flourished in this generation. The *Civil and Military Gazette* was originally published in Simla as a weekly paper, the first issue being dated June 22nd, 1872. Prior to and in the days of the Mutiny the most famous paper in Northern India was the *Mofussilite*, originally published at Meerut, but afterwards at Agra and then at Ambala. After a lively existence for a few years in Simla the *Civil and Military Gazette* acquired and incorporated the *Mofussilite*, and in 1876 the office of the paper was transferred from Simla to Lahore, and the *Gazette* began to be published daily. During Lord Lytton's viceroyalty a reactionary policy was pursued towards the vernacular press which was restrained by a special Act passed in 1878. With the advent of Lord Ripon in 1880, the Press Act of Lytton was repealed in 1882. The influence of the native press especially grew to be very great, and its circulation too received a great fillip. This may be said to have gone on till 1897, when India entered upon a disastrous cycle of years during which plague and famine gave rise to grave political dis-

content which found exaggerated expression in the native press, both in the vernacular and in English. The deterioration in the tone of a section of the press became accentuated as years went on and prosecutions for sedition had little effect in checking the sinister influence.

In 1910 Lord Minto passed a Press Act applicable, not like Lytton's Act, to the peccant part alone, but like Canning's measure, to the entire press. This measure is having the desired effect inasmuch as it has undoubtedly checked seditious writing in all the provinces where it had previously been most rife. One marked effect of the Act has been to increase the influence and circulation of the moderate papers. There is some tendency, as in Eastern Bengal, to evade the Act by the secret production and dissemination of seditious leaflets. A Parliamentary White Paper published at the end of 1914 gives a return of statements showing the action taken under certain sections of the 1910 Act. It shows that of twenty-two printing presses coming under the first demand for security fount en failed to deposit the security and were in consequence closed. Of twenty newspapers treated in the same manner, fourteen ceased publication.

### Number of Printing Presses at Work, and Number of Newspapers, Periodicals, and Books Published.

Province.	Printing Presses.	Newspapers.	Periodicals.	Books.		
				In English or other European Languages.	In Indian Languages (Vernacular and Classical) or in more than one Language.	
Bengal .. .. .	740	124	201	392	2,323	
Bihar and Orissa .. .. .	138	26	31	77	690	
United Provinces .. .. .	514	124	207	242	1,784	
Punjab (a) .. .. .	207	72	119	172	2,049	
Delhi .. .. .	55	15	25	12	150	
North-West Frontier Province .. .. .	22	2	....	....	....	
Burma .. .. .	171	58	62	41	264	
Central Provinces and Berar .. .. .	82	16	11	12	102	
Assam .. .. .	39	15	9	9	52	
Ajmer-Merwara .. .. .	12	2	7	6	73	
Coorg .. .. .	1	....	1	....	....	
Madras .. .. .	645	(a) 236	1,928	502	2,108	
Bombay .. .. .	467	157	381	137	1,882	
Total, 1914-15 ..	3,102	847	2,988	1,602	11,477	
Totals ..	1913-14 ..	3,020	827	2,848	1,477	10,712
	1912-13 ..	2,828	873	2,395	1,062	9,651
	1911-12 ..	2,780	656	2,268	1,596	9,988
	1910-11 ..	2,751	658	1,902	1,578	10,063
	1909-10 ..	2,736	726	820	2,112	9,934
	1908-9 ..	2,594	738	895	1,087	8,345
	1907-8 ..	2,571	753	1,062	1,524	7,095
	1906-7 ..	2,490	744	973	1,589	8,126
	1905-6 ..	2,380	747	793	1,411	7,644

(a) For calendar year.

Newspapers and News Agencies registered under the Press Rules and arranged alphabetically according to Station where they are published and situated.

NOTE.—News Agencies are distinguished by an asterisk.

Stations.	Title in full.	Day of going to Press.
Agra .. ..	Kayastha Hitkari .. ..	1st, 8th, 16th, and 24th of every month.
Ahmedabad ..	{ Coronation Advertiser .. ..	Wednesdays.
		Sundays.
		Sundays.
		Saturdays.
		Gazette.
Ajmer .. ..	Rajasthan Samachar .. ..	Thursdays.
	Berar Samachar .. ..	Sundays.
Akola, Berar .. ..	Arakan Times .. ..	Mondays and Thursdays.
	Arakan News .. ..	Tuesdays and Fridays.
Akyab .. ..	Arakan Times .. ..	Mondays and Thursdays.
	Arakan News .. ..	Tuesdays and Fridays.
Aligarh .. ..	Allgarh Institute Gazette .. ..	Wednesdays.
Allahabad .. ..	Abhyudaya .. ..	Fridays.
	Hindustan Review .. ..	On first of every month.
	Leader .. ..	Daily, except Tuesdays.
	Pioneer .. ..	Daily.
Amraoti .. ..	{ Reuter's Telegram Company, Ltd.	....
		Tuesdays.
		Mondays.
		Mondays.
Amreli .. ..	Kartavya .. ..	Weekly.
	Framod Sindhu .. ..	Tuesdays.
Amritsar .. ..	Veer Shao Sanjeevinee .. ..	Mondays.
	Safir-i-Berar .. ..	Weekly.
Amroha .. ..	Islam Gazette .. ..	Thursdays.
	{ Khalsa Advocate .. ..	Weekly.
		Daily.
Bagerhat .. ..	Punjab Durban .. ..	Bi-Weekly.
Amroha .. ..	Vakil .. ..	Bi-Weekly.
	Ittihad .. ..	Saturdays.
Bagerhat .. ..	Jagaran .. ..	Sundays.
Bangalore .. ..	Daily Post .. ..	Daily.
	{ Army and Civil News .. ..	Daily.
		Mondays and Thursdays.
	Kasim-ul-Akhbar .. ..	Mondays and Thursdays.
Bankipore (Patna) .. ..	{ Behar Herald .. ..	Saturdays.
		Daily.
		Daily.
		Daily.
		Daily.
		Fridays.
		Weekly.
		Monthly.
Barisal .. ..	{ Atmavidya (Hindi) .. ..	Monthly.
		Monthly.
Barisal .. ..	{ Aryavarta (Hindi) (Patna) .. ..	Monthly.
		Monthly.
Barisal .. ..	Barisal Hitaishi .. ..	Sundays.
	Kashipur Nibashi .. ..	Weekly.
Baroda .. ..	Shree Sayaji Vijaya .. ..	Thursdays.
	Bassein News .. ..	Tuesdays and Fridays.
Bassein, Burma .. ..	Bassein News .. ..	Tuesdays and Fridays.
	Lamp .. ..	Every other Saturday.
Batticaloa (Ceylon) .. ..	Belgaum Samachar .. ..	Mondays.
Belgaum .. ..	Belgaum Samachar .. ..	Mondays.



Stations,	Title in full.	Date of going to Press.
Benares City ..	Awazal Khalk .. .. Bharat Jiwan .. .. Indian Student .. .. "Hindi Kesari" .. ..	Every Wednesday. Sundays. 27th of each month. Fortnightly.
Bhavnagar .. ..	Jainhasan .. .. "Jaina" .. ..	Tuesdays. Weekly.
Bihar (Patna) .. ..	Ittehad .. ..	Wednesdays.
Bijapur .. ..	Karnatak Valbhav .. ..	Saturdays.
Bombay .. ..	Advocate of India .. ..	Daily.
	Akhbar-i-Islam .. ..	Daily.
	Akhbar-i-Soudagar .. ..	Daily, except on Sundays.
	Andhra Patrika .. ..	Wednesdays.
	Argus .. ..	Sundays.
	Associated Press * .. ..	.....
	Bombay Chronicle .. ..	Daily.
	Bombay Guardian .. ..	Fridays.
	Bombay Samachar .. ..	Daily.
	Briton .. ..	Daily, except Saturdays.
	Catholic Examiner .. ..	Thursdays.
	Dyan Prakash .. ..	Daily.
	Gujarati .. ..	Saturdays.
	Illustrated Sporting Review .. ..	Saturdays.
	Indian Education .. ..	Monthly.
	Indian Industries and Power .. ..	On the 15th of each month.
	Indian Investors' Referee .. ..	Fridays.
	Indian Social Reformer .. ..	Saturdays.
	Indu Prakash .. ..	Daily, except Sundays.
	Jaina .. ..	Saturdays.
	Jam-e-Jamshed .. ..	Daily, except Saturdays.
	Kaiser-i-Hind .. ..	Saturdays 24.
	Message .. ..	Daily.
	Muslim Herald .. ..	Daily, except Sundays.
	Muslim Times .. ..	Fridays.
	Native Opinion .. ..	Tuesdays.
	O Anglo-Lusitano .. ..	Saturdays.
	The Parsi .. ..	Daily.
	The Praja and Mitra .. ..	.....
	Railway Times .. ..	Fridays.
	Rast Goftar .. ..	Sundays.
	Reuter's Indian Journal .. ..	Daily.
	Reuter's Telegram Company, Ltd. .. ..	.....
	Sandesh .. ..	Daily.
	Sanj Vartaman .. ..	Daily, except Sundays.
	Shri Venkateshwar Samachar .. ..	Fridays.
	Times of India .. ..	Daily.
	Times of India Illustrated Weekly .. ..	Wednesdays.
	Young India .. ..	Weekly.
	United Press Syndicate * .. ..	.....
Bowringpet .. ..	Kolar Gold Fields News .. ..	Tuesdays.
Budaon .. ..	Akbar Zulfarnain .. ..	6th, 13th, 20th, and 27th of every month.
Calangute (Goa) .. ..	A Voz do Povo .. ..	Saturdays.
Calcutta .. ..	Albalagh .. ..	Fridays.
	Amrita Bazar Patrika .. ..	Daily.
	Asian .. ..	Fridays.
	Associated Press * .. ..	.....
	Bangabasi .. ..	Wednesdays.
	Bengalee .. ..	Daily, except Sundays.
	Bharata Mitra .. ..	Thursdays.
	Calcutta Intelligence Syndicate .. ..	.....
	Capital .. ..	Thursdays.
	Catholic Herald of India .. ..	Tuesdays.
	Dainik Hitabadi .. ..	Daily, except Wednesdays.

Stations.	Title in full.	Day of going to Press.
Calcutta .. .. .	Empire (Calcutta Evening News).	Daily, except Sundays.
	Englishman .. .. .	Daily.
	Habul Matin .. .. .	Daily, except Sundays.
	Hindoo Patriot .. .. .	Daily, except Saturdays.
	Hitabadi .. .. .	Wednesdays.
	Indian and Eastern Engineer .. .. .	14th of each month.
	Indian Daily News .. .. .	Daily, except Sundays.
	Indian Echo .. .. .	Fridays.
	Indian Empire .. .. .	Wednesdays and Saturdays.
	Indian Engineering .. .. .	Thursdays.
	Indian Express .. .. .	Once a month.
	Indian Methodist Times .. .. .	Last day of month.
	Indian Mirror .. .. .	Daily.
	Indian Nation .. .. .	Saturdays.
	Indian News Agency .. .. .	.....
	Indian Planters' Gazette .. .. .	Saturdays.
	Indian Public Health .. .. .	15th of each month.
	Indo-British Press Agency .. .. .	.....
	Mussalman .. .. .	Thursdays.
	Mohem Chronicle and Muham- madan Observe.	Thursdays.
	Railways and Shipping .. .. .	11th, 15th and last day of every month.
Calicut .. .. .	Reis and Rayyet .. .. .	Saturdays.
	Reuter's Telegram Company, Limited.	.....
	Sanjibani .. .. .	Wednesdays.
	Samay .. .. .	Wednesdays.
	Statesman .. .. .	Daily.
	Times of India Illustrated Weekly.	Wednesdays.
	United Press Syndicate* .. .. .	.....
	Kerala Sanchari .. .. .	Wednesdays.
	Manorama .. .. .	Tuesdays and Fridays.
	Mitavadi .. .. .	Daily.
Cawnpore .. .. .	West Coast Reformer .. .. .	Sundays and Thursdays.
	West Coast Spectator .. .. .	Wednesdays and Saturdays.
	Azad .. .. .	Wednesdays.
Chinsurah .. .. .	Reuter's Telegram Company, Li- mited	.....
	Zamana .. .. .	25th day of every month.
Chittagong .. .. .	Education Gazette .. .. .	Tuesdays.
	Jyoti .. .. .	Wednesdays.
Cochin .. .. .	Cochin Argus .. .. .	Saturdays.
	Coconada Ravi .. .. .	Thursdays.
	Malabar Herald .. .. .	Saturdays
Colombo .. .. .	Ceylon Catholic Messenger .. .. .	Tuesdays and Fridays.
	Ceylon Independent .. .. .	Daily.
	Ceylon Morning Leader .. .. .	Daily.
	Ceylon Observer .. .. .	Daily.
	Ceylon Sportsman .. .. .	Saturdays.
	Ceylonesse .. .. .	Daily.
	Dinakara Prakash .. .. .	Mondays, Tuesdays, Thursdays and Saturdays.
	Dinamina .. .. .	Daily, except Sundays.
	Dravida Mitran .. .. .	Wednesdays and Saturdays.
	Islam Mitturan .. .. .	Saturdays.
	Nanartha Pradipaya .. .. .	Mondays and Thursdays.
	Sarasavi Sandaresa .. .. .	Tuesdays and Fridays.
	Sihala Samaya .. .. .	Mondays and Thursdays.
	Sinhala Bauddhaya .. .. .	Saturdays.
	Times of Ceylon .. .. .	Daily.

Stations.	Title in full.	Date of going to Press.
Cuttack .. ..	Utkal Deepika .. ..	Fridays.
Cuttack .. ..	Nihar .. ..	Mondays.
Dacca .. ..	{ Associated Press* .. ..	Mondays. ....
	{ Dacca Gazette .. ..	Sundays.
	{ Dacca Prakash .. ..	Sundays.
	{ East .. ..	Daily.
	{ Herald .. ..	Daily.
Darjeeling .. ..	Darjeeling Visitor and Advertiser	Mondays.
Delhi .. ..	{ Associated Press .. ..	Daily. ....
	{ Durbar Bulletin .. ..	Daily.
	{ Hamdard .. ..	Daily.
	{ Indian News Agency .. ..	Daily, except Sundays.
	{ Morning Post .. ..	Daily.
Dharwar .. ..	{ Pioneer Supplement .. ..	Daily.
	{ Dharwarvritt .. ..	Wednesdays.
	{ Karnataka Patra .. ..	Fridays.
	{ Karnatakavritta and Dhananjaya	Tuesdays.
	{ Kshema Samachar .. ..	Thursdays.
Dhulia .. ..	{ Raja Hansa .. ..	Daily.
	{ Khandesh Valbhav .. ..	Fridays.
Dibrugarh .. ..	Times of Assam .. ..	Fridays.
Gaya .. ..	Kayastha Messenger .. ..	Sundays.
Guntur .. ..	Deashabimani .. ..	Daily.
Hubli .. ..	Kannad Kesari .. ..	Fridays.
Hyderabad, Deccan	{ Musheer-i-Deccan .. ..	Daily.
	{ Sahifa-i-Rozana .. ..	Daily.
	{ Usman Gazette .. ..	Daily.
Hyderabad, Sind ..	{ Sind Journal .. ..	Wednesdays.
	{ Musafir .. ..	Saturdays.
	{ Sind Mail .. ..	Daily.
Jaffna .. ..	{ Ceylon Patriot and Weekly Ad-	Tuesdays.
	{ vertiser. Jaffna Catholic Guardian ..	Saturday Mornings.
Jaffna (Vannarponnai) ..	Hindu Organ .. ..	Mondays and Thursdays.
Jubbulpore .. ..	{ India Sunday School Journal ..	Third Thursday of every month.
	{ C. P. Standard .. ..	Daily.
Kankhal .. ..	Saddhram Pracharak .. ..	Tuesdays.
Karachi .. ..	{ Karachi Chronicle .. ..	Saturdays.
	{ Parsi Sansar .. ..	Saturdays.
	{ Praja Mitra .. ..	Tuesdays and Fridays.
	{ Phoenix .. ..	Tuesdays and Fridays.
	{ Reuter's Telegram Company, Li-	....
	{ mited. Daily Gazette .. ..	Daily, except Sundays.
	{ Sind Observer .. ..	Wednesdays and Saturdays.
Khulna .. ..	{ Sind Sudhar .. ..	Saturdays.
	{ Star of India .. ..	Saturdays.
Kolhapur City .. ..	Khulna Basi .. ..	Saturdays.
Kottayam .. ..	{ Vidyavilas .. ..	Fridays.
	{ Malayala Manorama .. ..	Wednesdays and Saturdays.
Kottayam .. ..	{ Nazrani Deepka .. ..	Tuesdays.

Stations.	Title in full.	Day of going to Press.	
Kurunegala .. ..	Abhinawa Kawata Angana .. ..	Days prior to the 1st and 15th of every month.	
Lahore .. ..	Akhbar-i-Am .. ..	Daily.	
	Arya Patrika .. ..	Saturdays.	
	Associated Press .. ..	.....	
	Civil and Military Gazette .. ..	Daily, (Sundays excepted).	
	Desh .. ..	Daily.	
	Dipak .. ..	Daily (except Wednesdays.)	
	Hindu .. ..	Tuesdays.	
	Hindustan .. ..	Wednesdays.	
	Palsa Akhbar .. ..	Daily.	
	Punjabee .. ..	Tuesdays, Thursdays and Saturdays.	
	Punjab Observer .. ..	Wednesdays and Saturdays.	
	Punjab Samachar .. ..	Fridays.	
Rajput Gazette .. ..	1st, 8th, 16th and 24th of every month.		
Larkana .. ..	Reuter's Telegram Company, Limited. .. ..	.....	
	Tribune .. ..	Daily, except Sundays.	
	Watan .. ..	Thursdays.	
	Khairkhah .. ..	Saturdays.	
	Larkana Gazette .. ..	Fridays.	
	Sind Patrika .. ..	Saturdays.	
	Advocate .. ..	Wednesdays and Saturdays.	
	Anand .. ..	Thursdays.	
	Indian Daily Telegraph .. ..	Daily.	
	Kaukab-i-Hind .. ..	Wednesdays.	
	Kayastha Mutual Family Pension Fund News. .. ..	15th day of every month.	
	Lucknow .. ..	Muslim Gazette .. ..	Tuesdays.
Oudh Akhbar .. ..		Daily, except Sundays.	
Indian Witness .. ..		Wednesdays	
Al-Mazmun .. ..		On the first of every month.	
Andhra Patrika .. ..		Tuesdays.	
Anglo-Indian .. ..		Thursdays.	
Associated Press .. ..		.....	
Hindu—See against Mount Road .. ..		.....	
Indian Patriot .. ..		Daily.	
Indian Railway Journal .. ..		15th of every month.	
Madras .. ..		Jarida-i-Rozgar .. ..	Saturdays.
		Law Times .. ..	Saturdays.
	Madras Mail .. ..	Daily.	
	New India .. ..	Daily.	
	Madras Times .. ..	Daily, except Saturdays.	
	Muhhammadan .. ..	Mondays and Thursdays.	
	Mukhbir-i-Deccan .. ..	Wednesdays.	
	Reuter's Telegram Company, Limited. .. ..	.....	
	Swadesa Mitran .. ..	Daily.	
	Shamsul Akhbar .. ..	Mondays.	
	Madura .. ..	South Indian Mail .. ..	Mondays.
	Mapuca .. ..	Futuro .. ..	Daily.
Margao (Goa) .. ..	Noticias .. ..	Mondays.	
	Ultramar .. ..	Mondays and Fridays.	

Stations.	Title in full.	Day of going to Press.
Matheran .. ..	Matheran Jottings .. ..	Tuesdays and Fridays.
Mattancheri .. ..	Chakravarthi .. ..	Saturdays.
Mirpurkhas .. ..	{ Mirpurkhas Gazette .. ..	Wednesdays.
Mirzapur City .. ..	{ Zaminder Gazette .. ..	Thursdays.
Mirsapur City .. ..	Khichri Samachar .. ..	Saturdays.
Moradabad .. ..	{ Al-Musher .. ..	4th, 11th, 18th, 25th of every month.
Moradabad .. ..	{ Colonel .. ..	1st, 8th, 16th and 24th of every month.
Moradabad .. ..	{ Meston News .. ..	4th, 12th, 20th and 28th of every month.
Moradabad .. ..	{ Sitara-i-Hind .. ..	4th, 12th, 20th and 28th of every month.
Moulmein .. ..	Moulmein Advertiser .. ..	Daily.
Mount Road, Madras .. ..	Hindu .. ..	Daily, except Sundays.
Mussoorie .. ..	{ Pioneer Mussoorie Bulletin .. ..	Daily.
Mussoorie .. ..	{ Mussoorie Times .. ..	Thursdays.
Muttra .. ..	Inniskillner .. ..	7th of each month.
Muvattupuzha .. ..	Kerala Dheepika .. ..	Saturdays.
Mymensingh .. ..	Charu Mihir .. ..	Tuesdays.
Nagercoil .. ..	Travancore Times .. ..	Tuesdays.
Nagpur .. ..	{ Nagpur and Berar Times .. ..	Fridays.
Nagpur .. ..	{ Hitaavada .. ..	Fridays.
Nagpur .. ..	{ Maharashtra .. ..	Tuesdays.
Nagpur .. ..	{ Desha-Sewak .. ..	Mondays.
Naini Tal .. ..	Naini Tal Gazette .. ..	Wednesdays.
Nawari .. ..	Independent .. ..	Saturdays.
Nova Goa .. ..	{ Boletim do Comercio .. ..	Wednesdays.
Nova Goa .. ..	{ O'Commercio .. ..	Daily.
Nova Goa .. ..	{ Odebate .. ..	Mondays.
Nova Goa .. ..	{ Heraldo .. ..	Daily, except Mondays.
Nova Goa .. ..	{ O'Heraldo .. ..	Daily, except Sundays and holidays.
Ootacamund .. ..	South of India Observer and Nilgiri News .. ..	Daily issue except Sundays.
Pandharpur .. ..	Pandhari Mitra .. ..	Sundays.
Panjim Goa .. ..	O'Crente .. ..	Saturdays.
Parur .. ..	Uttara Tharaka .. ..	Saturdays.
Pen .. ..	Sudhakar .. ..	Fridays.
Peshawar .. ..	{ Afghan .. ..	Daily.
Peshawar .. ..	{ Reuter's Telegram Company, Limited. .. ..	.....
Peshawar .. ..	{ Peshawar Daily News .. ..	Daily.
Peshawar .. ..	{ Deccan Herald .. ..	Daily.
Peshawar .. ..	{ Dynana Prakash .. ..	Daily, except Mondays.
Peshawar .. ..	{ Kesari .. ..	Tuesdays.
Peshawar .. ..	{ Maharatta .. ..	Sundays.
Poona .. ..	{ Pandit .. ..	Daily, and weekly on Wednesdays.
Poona .. ..	{ Poona Mail .. ..	Daily.
Poona .. ..	{ Evening Despatch .. ..	Daily.
Poona .. ..	{ Sudharak or Reformer .. ..	Sundays.

Stations.	Title in full.	Day of going to Press.
Quetta .. ..	{ Baluchistan Gazette .. ..	Wednesdays and Saturdays.
Quilon .. ..	{ Quetta News War Bulletin .. ..	Daily.
Rajkot .. ..	{ Malayali .. ..	Wednesdays and Saturdays.
	{ Kathiawar Times .. ..	Wednesdays and Sundays.
	{ Burma Sunday Times .. ..	Sundays.
Rangoon .. ..	{ Rangoon Gazette .. ..	Daily, except Mondays.
	{ Rangoon Times .. ..	Daily, except Sundays.
	{ Bakool .. ..	Saturdays.
Ratnagiri .. ..	{ Satya Shodhak .. ..	Sundays.
Rawalpindi .. ..	{ Punjab Times .. ..	Saturdays and Wednesdays.
Satara .. ..	{ Shubha Suchaka .. ..	Fridays.
Satara City .. ..	{ Prakash .. ..	Wednesdays.
	{ Hyderabad Bulletin .. ..	Daily.
Secunderabad .. ..	{ Notice Sheet .. ..	Daily.
Shahjahanpur .. ..	{ Sarpunch .. ..	Daily.
Shikarpur (Sind) .. ..	{ Trade Advertiser (Waper-Sama- char) .. ..	Saturdays.
Shillong .. ..	{ Assam Advertiser .. ..	Fridays.
	{ Kalpataru .. ..	Sundays.
Sholapur .. ..	{ Sholapur Samachar .. ..	Tuesdays.
Silchar .. ..	{ Englishman Bulletin .. ..	Daily.
Do. .. ..	{ Surma .. ..	Sundays
	{ Associated Press .. ..	.....
	{ Indian News Agency .. ..	.....
	{ Indian War Cry .. ..	27th of each month.
Simla .. ..	{ News of India .. ..	Wednesdays.
	{ Pioneer Daily Bulletin .. ..	Week days.
	{ Reuter's Telegram Company, Limited. .. ..	.....
	{ Sindhi .. ..	Saturdays.
Sukkur .. ..	{ Sind Advocate .. ..	Thursdays
	{ Apakshapata .. ..	Saturdays.
	{ Deshi Mitra .. ..	Thursdays.
Surat .. ..	{ Gujrat Mitra and Gujarat Darpan .. ..	Saturdays.
	{ Praja Pokar .. ..	Wednesdays.
	{ Surat Akhbar .. ..	Sundays.
Sylhet .. ..	{ Paridarsaka .. ..	Wednesdays.
Tamluk .. ..	{ Tamalika .. ..	Saturdays.
Tangail .. ..	{ Islam Rabi .. ..	Fridays.
Thana .. ..	{ Arunodaya .. ..	Sundays.
Trichur .. ..	{ Lokaprakasam .. ..	Mondays.
Truvalla .. ..	{ Kerala Taraka .. ..	Wednesdays.
Trivandrum .. ..	{ Western Star .. ..	Tuesdays, Thursdays, and Satur- days.
Vizagapatam .. ..	{ Andhra Advocate .. ..	Fridays.
	{ Modavritta .. ..	Mondays.
Wai .. ..	{ Vrittasar .. ..	Mondays.
Yeotmal .. ..	{ Harikishore .. ..	Sundays.

## INDIAN PRESS LAW.

The Newspapers (Incitements to Offences) Act, 1908, was passed in view of the close connexion between the perpetration of outrages by means of explosives and the publication of criminal incitements in certain newspapers. The Act deals only with incitements to murder, to offences under the Explosive Substances Act, 1908, and to acts of violence. It gives power in such cases to confiscate the printing press used in the production of the newspaper, and to stop the lawful issue of the newspaper. The procedure adopted in the Act follows the general lines of that provided in the Code of Criminal Procedure for dealing with public nuisances, with the addition that the final order of the magistrate directing the forfeiture of the press is appealable to the High Court within 15 days. It is further provided that no action can be taken against a press save on the application of a Local Government. When an order of forfeiture has been made by the magistrate, but only in that case, the Local Government is empowered to annul the declaration made by the printer and publisher of the newspaper under the Press and Registration of Books Act, 1867, and thereafter neither that newspaper nor any other which is the same in substance can be published without a breach of the law.

The Indian Press Act, 1910, was a measure of wider scope, the main object of which was to ensure that the Indian press generally should be kept within the limits of legitimate discussion.

The Act deals, not only with incitements to murder and acts of violence, but also with other specified classes of published matter, including any words or signs tending to seduce soldiers or sailors from their allegiance or duty, to bring into hatred or contempt the British Government, any Native Prince, or any section of His Majesty's subjects in India, or to intimidate public servants or private individuals.

The different sections of the Act have in view (i) Control over presses and means of publication; (ii) control over publishers of newspapers; (iii) control over the importation into British India and the transmission by the post of objectionable matter; (iv) the suppression of seditious or objectionable newspapers, books, or other documents wherever found.

As regards the first of these objects, it is laid down that proprietors of printing presses making a declaration for the first time under section 4 of the Press and Registration of Books Act, 1867, shall give security, which may however, be dispensed with by the magistrate at his discretion; that the proprietors of presses established before the passing of the Act may similarly be required to give security if and when they are guilty of printing objectionable matter of the description to which the Act applies; and that, where security has been deposited, Local Governments may declare

such security forfeit where it appears to them that the press has been used for printing or publishing such objectionable matter. When the initial security so deposited has thus been forfeited, the deposit of further security in a larger sum is required before a fresh declaration can be made under section 4 of the Press and Registration of Books Act, and, if thereafter, the press is again used for printing or publishing objectionable matter the further security deposited and the press itself may be declared forfeit.

Control over publishers of newspapers, the second main object of the Act, is provided for in a similar manner. The keeping of a printing press and the publishing of a newspaper without depositing security when required are punishable with the penalties prescribed for failure to make the declarations required by sections 4 and 5 of the Press and Registration of Books Act, 1867.

Other provisions deal with the cases of books or pamphlets printed out of India or secretly in India. The more efficient control over the importation and transmission by post of objectionable matter of the kind described in the Act is given by empowering the customs and post office authorities to detain and examine packages suspected of containing such matter, and to submit them for the orders of the Local Government.

The fourth object of the Act is attained by authorising the Local Government to declare forfeit any newspaper, book or other document which appears to it to contain matter of the prohibited description, and upon such a declaration the Act empowers the police to seize such articles and to search for the same.

In any case in which an order of forfeiture is passed by the Local Government, an application may be made to the High Court on the question of fact whether the matter objected to is, or is not, of the nature described in the Act. For the most part the object of the Act has been secured, as regards the local press, without recourse to the power of confiscating security.

**Press Association of India.**—At the end of 1915 this Association was formed in Bombay. According to the articles of constitution "Its objects shall be to protect the press of the country by all lawful means from arbitrary laws and their administration, from all attempts of the Legislature to encroach on its liberty or of the executive authorities to interfere with the free exercise of their calling by journalists and press proprietors, and for all other purposes of mutual help and protection which may be deemed advisable from time to time." Members pay a minimum subscription of Rs. 10 annually. The affairs of the Association are managed by a Council. *Honorary Secretary:* Mr. B. G. Horniman, *The Bombay Chronicle*.

## Societies : Literary, Scientific and Social.

**AGRICULTURAL AND HORTICULTURAL SOCIETY OF INDIA** (Calcutta).—Founded 1820. Annual subscription Rs. 32. Entrance fee Rs. 8. *Secretary*, F. H. Abbott, 17, Alipore Road, Alipore.

**AGRI-HORTICULTURAL SOCIETY OF BURMA**.—*Secretary*, Capt. W. H. Allen, Victoria Park, Kandawgley.

**AGRI-HORTICULTURAL SOCIETY OF MADRAS**.—Established 1833. Quarterly subscription for members in Class A Rs. 7, in Class B Rs. 3. *Secretary*, P. F. Tyson, Mount Road, Teynampett, S. W., Madras.

**ANTHROPOLOGICAL SOCIETY OF BOMBAY**.—Founded 1846, to promote the prosecution of Anthropological research in India; to correspond with Anthropological Societies throughout the world; to hold monthly meetings for reading and discussing papers; and to publish a periodical journal containing the transactions of the Society. Annual subscription Rs. 10. *Secretary*, R. P. Masani, M.A., Town Hall, Bombay.

**ASIATIC SOCIETY OF BENGAL** (Calcutta).—*Secretary*, G. H. Tipper, M.A., 57, Park Street, Calcutta.

**BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA**.—It is hoped to start this Institute in July, 1917. Its objects are to provide an up-to-date Oriental library, to train students, to act as an information bureau, and to express gratitude to Sir R. G. Bhandarkar for his services to the cause of Sanskrit learning. *Hon. Secretary*, Dr. S. K. Belvalkar, 339, Narayan Peth, Poona.

**BOMBAY ART SOCIETY**.—Founded 1888, to promote and encourage Art by exhibitions of Pictures and Applied Arts, and to assist in the establishment and maintenance of a permanent gallery for Pictures and other works of Art. Annual exhibition every February. Annual subscription Rs. 10; Life Member Rs. 100. *Secretary*, S. V. Bhandarkar, Bombay.

**BOMBAY BRANCH OF THE CLASSICAL ASSOCIATION**.—The Classical Association was started, in 1903 in London, to promote the development and maintain the well-being of classical studies. The Bombay Branch was founded in 1910; it numbers over 100 members; holds 5 or 6 meetings a year; and publishes a yearly journal. Subscription Rs. 6 for ordinary and Rs. 2-8-0 for associate members. *Secretary*, Mrs. Gray, 13 Marine Lines, Bombay.

**BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY**.—Founded 1804, to investigate and encourage Oriental Arts, Sciences and Literature. Annual subscription Rs. 50. *Secretary*, The Rev. R. M. Gray, Town Hall, Bombay.

**BOMBAY NATURAL HISTORY SOCIETY**.—Founded 1883, to promote the study of Natural History in all its branches. The Society has a membership of about 1,700 and a small museum with a representative collection of the different vertebrates and invertebrates found in the Indian Empire and Ceylon. A Journal is published quarterly which contains articles on different natural history subjects as well as descriptions of new species and local lists of different orders. In the more recent numbers, serial articles on game birds, common snakes, and common butterflies have been appearing. Annual subscription Rs. 15. Entrance fee, Rs. 10. *Honorary Secretary*, W. S. Millard, *Curator*, N. B. Kinnear, Office and Museum, 6, Apollo Street, Bombay.

**BRITISH AND FOREIGN BIBLE SOCIETY**.—Since 1811 the British and Foreign Bible Society has been at work in this country. It has 6 Auxiliaries in India and an Agency in Burma. The first Auxiliary was established in Calcutta, in 1811, then followed the Bombay Auxiliary in 1813, the Madras Auxiliary in 1820, the North India Auxiliary in 1845, the Punjab Auxiliary in 1863, the Bangalore Auxiliary in 1875, while the Burma Agency was founded in 1899. The Bible or some portion of it is now to be had in 87 different Indian languages and dialects and the circulation throughout India and Burma reached over 1,000,000 copies in 1915. The Bibles, Testaments, and Portions in the various Vernaculars are sold at rates which the very poorest can pay, and at considerable loss to the Society. Grants of English Scriptures are made to Students who pass the various University examinations, whose applications are countersigned by their Principals, as under:—

The 4 Gospels and the Book of Acts in 1 Vol. to Matriculates.  
The New Testament and Psalms to Intermediates.  
The Bible to Graduates.

Last year no fewer than 10,700 volumes were so distributed. Portions of Scriptures in the important vernaculars have been prepared in raised type for the use of the Blind and large grants of money are annually given to the different Missions, to enable them to carry on Bible women's work and Colportage.

Besides the British and Foreign Bible Society, there is Bible work carried on in India, Assam and Burma in a much smaller way by the Bible Translation Society—which is connected with the Baptist Missionary Society—the American and Canadian Baptist Mission, the National Bible Society of Scotland, and the Tranquebar Tamil Bible Society,



The following table shows the growth in the British & Foreign Bible Society's work during the past few years in India & Burma :—

## CIRCULATION OF THE B.F.B.S. IN INDIA.

Auxiliaries.	1915.	1914.	1913.	1912.
Calcutta .. .. .	159,004	169,285	184,758	191,809
Bombay .. .. .	184,927	181,462	178,720	161,128
Madras .. .. .	233,420	263,805	280,552	268,688
Bangalore .. .. .	.....	85,658	86,233	83,630
North India .. .. .	172,172	210,754	186,650	212,011
Punjab .. .. .	114,251	122,224	92,484	84,014
Burma .. .. .	117,948	117,518	117,225	108,646
Total copies of Scriptures .. ..	981,722	1,100,696	1,076,617	1,059,926

These returns do not include the copies which any Auxiliary has supplied to London or to other Auxiliaries and agencies during the year.

**BRITISH MEDICAL ASSOCIATION (Bombay Branch).—**Founded 1886, to promote Medical and the Allied Sciences and the maintenance of the honour and interests of the Medical Profession. *Secretary*, Dr. D. R. Bardi, Bombay.

**BOMBAY MEDICAL UNION.**—Founded 1883 to promote friendly intercourse and exchange of views and experiences between its members and to maintain the interest and status of the medical profession in Bombay. The entrance fee for Resident members Rs. 5, monthly subscription Rs. 2. Absent members Re. 1, and non-resident members yearly subscription Rs. 5. *President*: Khan Bahadur Dr. N. H. Choksy. *Secretaries*: Dr. D. M. Gagrati and Dr. K. K. Dadachanj. Dr. M. D. D. Gilder, Hon. Librarian, Sir D. M. Petit, Medical Union Library. Hon. Treasurer Dr. V. M. Bhajekar. Readymoney Buildings, Apollo Bunder, Bombay.

**BOMBAY SANITARY ASSOCIATION.**—Founded to create an educated public opinion with regard to sanitary matters in general; (b) to diffuse the knowledge of sanitation and hygiene generally, and of the prevention of the spread of disease amongst all classes of people by means of lectures, leaflets and practical demonstrations and, if possible, by holding classes and examinations; (c), to promote sanitary science by giving prizes, rewards or medals to those who may by diligent application add to our knowledge in sanitary science by original research or otherwise; (d) to arrange for homely talk or simple practical lectures for mothers and girls in the various localities and different chawls, provided the people in such localities or chawls give facilities. The Sanitary Institute Building in Princess Street, which has lately been built by the Association, at a cost of nearly Rs. 1,00,000 the foundation stone of which was laid by Lady Willingdon in March, 1914, and opened in March, 1915, is a large and handsome structure with a large Lecture Hall, Library, Museum, etc., and also provides accommodation for King George V Anti-Tuberculosis League Dispensary and

Museum and the Malaria Office and the Lady Willingdon Scheme. *Hon. Secretary*: Dr. J. A. Turner, C.I.E., Municipal Health Officer, Bombay.

**EUROPEAN ASSOCIATION.**—The European Association was established in 1883 under the title of the European and Anglo-Indian Defence Association and was re-established in 1912 under the title of the European Defence Association, but the present title was adopted in 1913. The Association has for its objects the general protection of European interests and the promotion of European welfare. The Association numbers 4,150. The Head Offices are at Grosvenor House, Calcutta. *President*, The Hon'ble Mr. Archy Birkenmyre. *Secretary*, Mr. Alec Marsh.

**BRANCHES OF THE EUROPEAN ASSOCIATION.**

**ASSAM VALLEY, DIBRUGARH.**—*Chairman*, Mr. M. M. Hadow. *Secretary*, Mr. W. Dorward.

**BIHAR, MOZUFFERPORE.**—*Chairman*, Mr. V. N. Hickey C.I.E. *Secretary*, Mr. J. M. Wilson.

**BOMBAY**—*Chairman*, The Hon'ble Mr. J. S. Wardlaw Milne. *Secretary*, Mr. A. W. S. Wile.

**DARJEELING**—*Chairman*, The Hon'ble Mr. H. R. Irwin. *Secretary*, Mr. G. Wrangham-Hardy.

**DELHI.**—*Chairman*, Mr. C. E. Bickley Roe. *Secretary*, Mr. R. E. Grant Govan.

**DOOARS, JALPAIGURI**—*Chairman*, Mr. H. Child. *Secretary*, Mr. J. M. Walker.

**MADRAS.**—*Chairman*, Sir William B. Hunter. *Secretary*, Mr. H. H. Chettle.

**SIND, KARACHI.**—*Chairman*, Mr. W. R. Carstairs. *Secretary*, Mr. R. D. Marshol.

**SURMA VALLEY, SILCHAR.**—*Chairman*, The Hon'ble Mr. R. St. J. Hickman. *Secretary*, The Hon'ble Mr. R. St. J. Hickman.

**UNITED PROVINCES, CAWNPORE.**—*Chairman*, Mr. T. Smith. *Secretary*, Mr. J. G. Ryan.

**INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE (Calcutta).**—*Secretary*, Dr. Amrita Lal Sircar, 210, Bow Bazar Street, Calcutta.

**INDIAN MATHEMATICAL SOCIETY**, founded in 1907 for the advancement of Mathematical studies in India. It conducts a bi-monthly journal in which papers on mathematical subjects are published and maintains a library with current mathematical periodicals in all languages and new books in the subject. The library is located in the Fergusson College, Poona, whence the journals and books are circulated to members by post. The journal of the Society is published in Madras. There are about 150 members from all parts of India. *President*, Diwan Bahadur R. Ramchandra Row, of Nellore, Madras. *Secretaries*, Prof. D. D. Kapadia, Poona, and Prof. M. T. Naranjengar, Bangalore. *Librarian*, Principal R. P. Paranjpye, Poona.

**INDIAN SOCIETY OF ORIENTAL ART** (Calcutta.)—*Joint Secs. and Treasrs.*, N. Blount and B. C. Law, P. O. Box No. 8, Calcutta.

**INDIA SUNDAY SCHOOL UNION**.—The India Sunday School Union is a large indigenous interdenominational Society having the sympathy and Co-operation of the greater number of Missionary Societies in India. The great purposes of the Union are the promotion of systematic and careful Bible study, and the increased efficiency of Sunday School in India. Its operations extend beyond the borders of India itself to Arabia, Siam, Borneo and Assam. Upwards of 650,000 Sunday School scholars and teachers and 13,944 Sunday Schools are connected with the Union, speaking 60 Vernaculars. One Central and 40 Provincial Committees control its Indian work, which forms part of a world wide movement with a membership of 28,000,000.

The India Union was founded in Allahabad in 1876. Yearly examinations are held for both teachers and scholars in 31 centres, for which medals, prizes, scripture awards, and certificates are granted to successful candidates, upwards of 20,000 entered these Exams. for 1913. Notes on the daily portions of the Interdenominational Bible Reading Association are published by the I. S. S. U. in English and 14 Vernaculars, and 50 editions of the S. S. Lesson Expositions are published in 20 Vernaculars. In addition, there is a large publication of literature dealing with all phases of child study and moral and religious training. The monthly publication of the Union is the *India Sunday School Journal*. Two whole-time and twenty-four part-time missionaries are devoted to the work of Union. The Teachers Training Department is under the care of Mr. E. A. Annett.

*General Secretary of the Union*, the Rev. R. Burges, India Sunday School Union Office, Jubulpore.

**MADRAS FINE ARTS SOCIETY**.—*Secretary*, Edgar Thurston, Central Museum, Madras.  
**MADRAS LITERARY SOCIETY AND AUXILIARY OF THE ROYAL ASIATIC SOCIETY**.—*Secretary*, W. F. Grahame, I.C.S., College Road, Nungambakum.

**NATIONAL INDIAN ASSOCIATION**.—Founded in 1870. Its objects are:—(a) To extend in England, knowledge of India, and interest in the people of that country. (b) To co-operate with all efforts made for advancing Education

and Social Reform in India. (c) To promote friendly intercourse between English people and the people of India. In all the proceedings of the Association the principle of non-interference in religion and avoidance of political controversy is strictly maintained. It has branches in Bombay, Madras and the Punjab. *Hon. Secretary*, Miss Beck, 21 Cromwell Road, London. Publication. *The Indian Magazine and Review*, a monthly Journal which chronicles the doings of the Association in England and in India, and takes note of movements for educational and social progress. It publishes articles about the East to interest Western readers, and articles about the West to interest readers in the East.

**PHILATELIC SOCIETY OF INDIA**.—Annual subscription Rs. 20. *Secretary*, J. Godinho, Girgaum, Bombay.

**PHOTOGRAPHIC SOCIETY OF INDIA** (Calcutta).—Annual subscription Rs. 24 (Town Members) and Rs. 10 (Mofussil members). Entrance fee Rs. 20 and Rs. 10. *Secretary*, A. K. Taylor, 40, Chowringhee Road, Calcutta.

**RANGOON LITERARY SOCIETY**.—*Secretary*, M. Hunter, 13, York Road.

**RANGOON MUSICAL AND DRAMATIC SOCIETY**.—Founded 1909. *Secretary*, Miss R. West, Dalhousie Street, Rangoon.

**SERVANTS OF INDIA SOCIETY**.—The Servants of India Society which was founded by the late Hon'ble Mr. Gopal Krishna Gokhale, C.I.E., in 1905, has its Headquarters in Poona and its objects are "to train national missionaries for the service of India and to promote by all constitutional means the true interests of the Indian people." Its government is vested in the First member or President and a Council. On the death of Mr. Gokhale in February, 1915, the Hon'ble Mr. V. S. Srinivasa Sastri was elected President. It has at present four branches, viz., (1) in Bombay, (2) in Madras, (3) in the United Provinces, (4) in Central Provinces. Each Branch consists of ordinary members, members under training and permanent assistants who work under the direction of a Senior Member. The branches engage both in propagandist and active work of political, educational, social, agricultural and philanthropic character. A fair idea of the work of a branch can be had from a brief description of the operations of the Bombay Branch whose members have so far undertaken activities in various fields. (1) Social purity like the Holika Sammelan of Bombay, (2) Social reform organization under the auspices of the National Social Conference, (3) rousing public opinion about elementary education, (4) promotion of the cause of elevation and education of Indian women by building up institutions like the Seva Sadan, Poona Branch, (5) Social Service as carried out by the Social Service League of Bombay, (6) spread of co-operative movement among the agriculturists, compositors, and mill-hands. The Co-operative societies started for the benefit of these poor people number about 25 with a total membership of over 1,200, capital of nearly one and half lakhs and a total turnover of three lakhs per year. 18 of these societies are for poor labouring classes so conducted as to free their

members entirely from their chronic indebtedness. Moreover educational work is organized by starting a Co-operative Secretaries' Training Class in Bombay for 60 secretaries from the various districts this year, (7) relief work connected with wide-spread calamities by organizing the Plague Relief Committee of Poona, which succeeded in making inoculation popular in the Deccan, the Salumbra Fire Relief Committee which arranged for the relief to sufferers for five years and by undertaking a scheme of non-official relief during the famines of 1907-08 and 1914 in the United Provinces, the famine in Gujarat and Kathiawar of 1911-12 and the famine of 1913 in the district of Ahmednagar, (8) organising public opinion on the question of Indians in South Africa.

Quite recently the United Provinces Branch organised a band of volunteers who rendered assistance, in a manner that drew general approbation, to the pilgrims at the last Kumbha Mela in Hardwar. The Society engages in journalistic work also, having in its control the *Hitavada*, an English weekly in Nagpur, the *Dnyan Prakash*, a Marathi daily in Poona, and the *Hindustani*, an Urdu weekly in Lucknow.

The expenses incurred by the Central Home of the Society in Poona and its four branches exceed Rs. 40,000 a year and this amount is made up by contributions from Indians, rich as well as poor. The present number of workers enlisted by the Society is about 20, most of whom are University men of considerable standing.

**President.**—The Hon'ble Mr. V. S. Srinivas Shastri, B.A.T., Triplicane, Madras, Senior Member, Madras Branch. Mr. Gopal Krishna Devadhar, M.A., Senior Member, Bombay Branch. Mr. Natesh Appaji Dravid, M.A., Senior Member, Central Provinces Branch. Mr. Hirdayanath Kunzru, B.A., B.S.C., Senior Member, Upper India Branch. Mr. Anant Vinayak Patwardhan, B.A., Senior Member, Business Branch, Poona. Messrs. Devadhar, Kunzru and Patwardhan constitute the Council of the Society with the Hon'ble Mr. Shastri as its President. Dr. H. S. Deva, L.M. & S., is the Secretary of the Council and also of the Society and remains at the headquarters of the Society at Poona.

**SEVA SADAN.**—The Seva Sadan Society was started on the 11th of July, 1908, by the late Mr. B. M. Malabari. It is the pioneer Indian ladies' society for training Indian sisters ministrant and serving (through them) the poor, the sick and the distressed. The society has a habitation in Gamdevi, Bombay. One-half of the Building and Endowment Fund of Rs. 82,000 has been spent mainly in building at Gamdevi, and partly in the purchase of two acres of land at Santa Cruz for a "Sisters' Home" and other purposes.

The Society maintains the following Institutions for training its probationers and for doing its other work. 1. A home for the Homeless. 2. An Industrial Home with various departments. 3. A Dispensary for Women and Children. 4. Ashrama (or Sisterhoods). 5. Free educational classes and a Library and Reading-room. 6. A Work-class, and Home-Classes in the quarters of the poor.

All these are for the benefit of poor women. **Secretary**, Miss R. A. Engineer, M.A., LL.B. **President**, Mrs. Ramabai Ranade. **Hon. Gen. Secretary**, the Hon. Mr. Lalubhai Samaldas, C.I.E. **Treasurers**, Sister Sushilabai and the Hon'ble Mr. Lalubhai Samaldas; **Trustees**, Sir Narayan Chandavarkar, Sir Bhalkhandra Krishna, Sir V. D. Thackersey, the Hon. Mr. G. K. Parekh and the Hon. Mr. Lalubhai Samaldas, C.I.E.

**CONSUMPTIVES' HOME SOCIETY.**—This Society was started by the late Mr. B. M. Malabari on the 1st of June 1909. It was registered under Act XXI of 1860. It is an off-shoot of the Seva Sadan. Mr. Malabari secured a large grant of land in a Himalayan pine forest in Dharmpur (Simla Hills) from H. H. the Maharaja of Patiala, for a Sanatorium for Consumptives. The Sanatorium was started on June 1, 1909, and has been in existence ever since. Mr. Malabari collected an Endowment Fund of about Rs. 67,000 lodged with the Treasurer, Charitable Endowments, under Act VI of 1890. Nearly Rs. 70,000 more have been spent on buildings, etc., and the current annual expenditure is about Rs. 14,000. Dr. Nanavati, L.M. & S., and B.Sc., is in charge of the Sanatorium.

**ROYAL SOCIETY OF ARTS, INDIAN SECTION.**—

This Society was founded in London in the 18th Century. Its recently published history by Sir Henry Trueman Wood, Secretary of the Society, gives the following account of the Indian Section. In 1857, a proposition was made by Mr. Hyde Clarke who wrote to the Council suggesting that "a special section be formed for India, another for Australia, one for English America and so on." It was suggested that the Indian Section should meet once a fortnight for the reading of papers. Nothing came of the suggestion until ten years later when Mr. Hyde Clarke returned to England, and in 1868 he renewed his proposal, but only proposing the formation of a committee which should organise conferences on Indian subjects. This time the suggestion was taken up more warmly. Mr. Hyde Clarke himself was placed on the Council, and the Indian Conferences which soon developed into the Indian Section, were started. "The Indian Section thus established became a most important department of the Society. It has had great results in India by spreading information as to the directions which the development of Indian manufactures and Indian products could most usefully take, and in England by giving similar information as to the industrial resources and progress of India itself. The Section has received great help from the Indian press and it has in return been of service to the Indian press in supplying useful information to it. It has been of great value to the Society itself as the means by which many members have been added to its list, so that in fact, thanks to a very large extent to the work of the Indian Section and of the allied section for the Colonies, a large proportion of the present number of members come from the dependencies of the Empire abroad." **Secretary**, Sir H. T. Wood, 18 John Street, Adelphi, London.

**WEST OF INDIA ANGLING ASSOCIATION.**—

The Association was started in 1912 at Poona, the headquarters were transferred to Bombay in 1915, and the membership has increased considerably since then. The rights for stocking, preserving and angling in Lake Sydenham at Waiwhan, near Lonavla, have been obtained by the Association from the Tata Hydro-Electric Power and Supply Co. and a commencement has been made with stocking the lake with sporting fish but it will not be opened for angling for a few years. A journal is published quarterly which contains articles on fishing, experiences in the rivers and lakes and on the coasts of India, the sporting fishes of the country and notes of general interest to Indian anglers.

Entrance fee Rs. 15, Annual subscription Rs. 10. *Patron*, H. E. Lord Willingdon, *President*, L. Comber, *Hon. Secretary and Treasurer*, L. Baines, C/o Russo-Asiatic Bank, Bombay.

**YOUNG WOMEN'S CHRISTIAN ASSOCIATION IN INDIA, BURMA AND CEYLON.**—

This was started in India in an organized and National way in 1896. The aim of the Association is to meet the needs of the girls and women who live in India from an Intellectual, Spiritual, Social and Physical standpoint. This is done in many ways in the 160 Associations that now flourish under the auspices of the National Young Women's Christian Association. The Associations in the big cities have a large membership and include all classes of the community. Clubs, Classes, Lectures, Study Courses, Music, Languages, Bible and Mission Study, social intercourse and all kinds of physical recreation are carried on as need arises in these City Associations. Boarding Homes are established in all the principal cities where teachers, nurses, business girls, students, apprentices, etc., can have a comfortable home with good, wholesome food and congenial companionship from Rs. 20 per month. Travellers' Aid work is done and many travellers, especially in the port cities, find accommodation as they pass through. A useful feature of the Association is the Holiday Homes that are conducted in the hills, where girls from the plains can find inexpensive accommodation and regain health and strength. Some of the homes accommodate as many as thirty-six at one time and hundreds benefit during the season. The work of the Association in the large cities is managed by a staff of professional Y. W. C. A. Secretaries, who are fully trained and equipped to meet the many demands that are made on them. These Secretaries are supplied from America, Britain, Australia, Canada and India.

Many of the Associations are in small up country stations where a handful of members constitute the Branch, led by some lady in the station who is glad of this opportunity for service. The members of these small stations may be transferred, in the ever-changing life of India, into the larger cities and then they learn in a fuller way what the Association can do to help them in an all-round development. The National Headquarters are in Bombay. The inter-denominational character of the Association is clearly kept in the forefront and ladies of many Christian denominations are on the

Committee. The National Committee consists of thirty-six members, resident and non-resident, representative of the City, student and Vernacular Departments in various sections of the country.

The Officers are: *President*, Mrs. Normand; *Vice Presidents*, Mrs. Gray, Mrs. McKenzie, Mrs. F. J. Clark; *Hon. Treasurer*, F. J. Clark; *National General Secretary*, Miss Rena Carswell; *National Business Secretary*, Miss Alice Shields. The General Secretaries of the principal places are: Bombay, Miss Whealdon; Calcutta, Miss Rutherford; Colombo, Miss Anderson; Rangoon, Miss Ledwith; Madras, Miss Downey; Bangalore, Miss Meager; Karachi, Miss O'Brian; Lahore, Miss Deulson; Mussoorie, Miss Gregory; Simla, "Secretary", Lucknow, Miss Davies; Naini Tal, Miss Kemp; Jubbulpore and Nagpur, Miss Ellis.

The National Office is in the British Foreign and Bible Society Building, Hornby Road, Bombay.

The Official Organ of the Association is "Women's outlook in India," which has circulation of over 1,500 copies monthly.

**YOUNG MEN'S CHRISTIAN ASSOCIATION.**—

This Association, which was founded by the late Sir George Williams on June 6, 1844, seeks to unite those young men who, regarding Jesus Christ as their God and Saviour according to the Holy Scriptures, desire to be His disciples, in their doctrine and in their life, and to associate their efforts for the extension of His kingdom among young men. The above is known as the "Paris Basis" of the Young Men's Christian Associations and it is world-wide. It was adopted at the first World's Convention in Paris in 1855 and re-affirmed at the Jubilee World's Convention in Paris in 1905. The aim of the Association is through its religious, educational, and physical work to cater for the threefold—spiritual, mental and physical—needs of young men, and its policy is one of intense loyalty to the Church.

There are, as a rule, two classes of members. Any young man who is a member in full communion of any Protestant Christian Church may be an active or voting member and any young man of good character may be an associate.

The Young Men's Christian Association though relatively new to India, is spreading very rapidly. The local Associations are autonomous and governed by local Boards of Directors. These Associations in convention elect a National Council of European and Indian laymen, who are responsible for the supervision and expansion of all forms of the Association work. Both the National Council and the local Associations employ specially trained full time Secretaries. Over two-thirds of the Secretaries are supported from funds raised in India and Ceylon. The remaining Secretaries are supported by the Associations of North America, Australasia, and Great Britain, but their work is directed by committees in India, to whom their services are loaned for the time-being. The first paid Secretary came to India over twenty-five years ago, in response to an appeal from

**Madras.** Soon afterwards the National Council was organised, and has become increasingly an indigenous institution.

There are now 10 Associations with 11,200 members. Of these about one quarter are Europeans and three-quarters are Indians, of whom over half are non-Christians. The following Associations own one or more buildings which serve as the local headquarters:—Allahabad, 2; Bangalore, 2; Alleppey, 1; Bombay, 4; Calcutta, 5; Calicut, 1; Coimbatore, 1; Colombo, 1; Galle, 1; Hyderabad, 1; Jubbulpore, 1; Karachi, 1; Lahore, 1; Madras, 1; Mandalay, 1; Maymyo, 1; Nagpur, 1; Naini Tal, 1; Rangoon, 3; Secunderabad, 1; Simla, 1.

In addition to buildings owned by the Association, bungalows have been rented to serve as headquarters in the following stations:—Ahmednagar, 1; Allahabad, 1; Bangalore, 2; Colombo, 2; Delhi, 1; Feroz-pore, 1; Hyderabad, 1; Jamalpur, 1; Jhansi, 1; Jubbulpore, 1; Lahore, 2; Lucknow, 1; Madras, 1; Madura, 1; Mhow, 1; Palamcottah, 1; Multan, 1; Poona, 1; Pudukottah, 1; Rangoon, 1; Trivandrum, 1.

The departments of the National Council are Railway, Rural, Literary, Army, High School, Architectural and Physical. The Student Christian Association is affiliated to the National Council and has branches in more than two score Colleges. The Railway Department is responsible for the Development of Associations amongst railway employees. At Jamalpur the railway institute and Apprentices Engineers-Club are operated by the Y. M. C. A. The Rural Department is organising village Y. M. C. A.'s and co-operative credit societies and promoting cottage industries. The Literary Department maintains three Secretaries:—J. N. Farquhar for Hinduism, E. J. Saunders for Buddhism and H. A. Walter for Muhammedanism. The object of the department is to promote a proper and sympathetic understanding of the non-Christian religions and show their relationship to Christianity. At the begin-

ning of the war there were but three Army Associations and five Army Secretaries in the whole of India. Now Association privileges are provided for British Troops in twenty-five cantonments under the direction of thirty-six Secretaries and Assistants. Thirty-five Secretaries have been sent to Mesopotamia to serve the Indian Expeditionary Force in Europe and 16 to British East Africa. In addition to organising Y. M. C. A.'s school boys, the High School Department arranges for holiday camps for boys and high school teachers. The National Council employs its own architects who plan and construct its buildings, hostels, and playgrounds. The Physical Department specialises on physical education and is promoting the playground movement.

The headquarters of the National Council is 86, College Street, Calcutta. The officers are:—

*Patron:*—His Excellency Lord Chelmsford, Viceroy and Governor-General of India.

*Chairman:*—Raja Sir Harnam Singh, K.C.I.E.

*Treasurer:*—W. R. Gourlay, Esq., I.C.S. 8, Government Place, Calcutta.

*Joint Treasurer:*—L. Robertson, Esq., I.C.S.  
*General Secretaries:*—L. C. Carter, A. C. Harte, K. T. Paul.

The Bombay Association now possesses four well-equipped buildings:—Wodehouse Road, Lamington Road, Rebsch Street, and Reynolds Road. The President is Mr. D. M. Inglis, and the General Secretary is Mr. L. G. S. Cranna. In connection with each building there is a well managed hostel, one for Anglo-Indian apprentices, one for Indian students, one primarily for European business men, and one for Indian. The Elton Hockey Tournament and the Condon Tennis Tournament are held annually under the auspices of the Bombay Association.

TABLE OF WAGES, INCOME, &c.  
Showing the amount for one or more days at the rates of 1 to 16 Rupees per Month of 31 Days.

Rupees.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Days.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	0 0 60	1 0 0	1 60	2 0 0	2 60	3 10	3 70	4 10	4 70	0 5	1 0 5	0 6	0 6	0 9	0 7	0 9
2	0 1 00	2 0 0	3 10	4 10	5 10	6 20	7 20	8 20	9 30	0 10	1 10	0 12	0 13	0 14	0 15	0 16
3	0 1 60	3 10	4 70	5 70	6 80	7 80	8 80	9 80	10 10	0 15	1 15	0 16	0 17	0 18	0 19	0 20
4	0 2 00	4 10	5 20	6 20	7 20	8 20	9 20	10 20	11 20	0 20	1 20	0 21	0 22	0 23	0 24	0 25
5	0 2 60	5 10	6 30	7 30	8 30	9 30	10 30	11 30	12 30	0 25	1 25	0 26	0 27	0 28	0 29	0 30
6	0 3 00	6 20	7 40	8 40	9 40	10 40	11 40	12 40	13 40	0 30	1 30	0 31	0 32	0 33	0 34	0 35
7	0 3 60	7 30	8 50	9 50	10 50	11 50	12 50	13 50	14 50	0 35	1 35	0 36	0 37	0 38	0 39	0 40
8	0 4 00	8 40	9 10	10 10	11 10	12 10	13 10	14 10	15 10	0 40	1 40	0 41	0 42	0 43	0 44	0 45
9	0 4 60	9 10	10 20	11 20	12 20	13 20	14 20	15 20	16 20	0 45	1 45	0 46	0 47	0 48	0 49	0 50
10	0 5 00	10 20	11 30	12 30	13 30	14 30	15 30	16 30	17 30	0 50	1 50	0 51	0 52	0 53	0 54	0 55
11	0 5 60	11 30	12 40	13 40	14 40	15 40	16 40	17 40	18 40	0 55	1 55	0 56	0 57	0 58	0 59	0 60
12	0 6 00	12 40	13 50	14 50	15 50	16 50	17 50	18 50	19 50	0 60	2 00	0 61	0 62	0 63	0 64	0 65
13	0 6 60	13 10	14 20	15 20	16 20	17 20	18 20	19 20	20 20	0 65	2 05	0 66	0 67	0 68	0 69	0 70
14	0 7 00	14 20	15 30	16 30	17 30	18 30	19 30	20 30	21 30	0 70	2 10	0 71	0 72	0 73	0 74	0 75
15	0 7 60	15 30	16 40	17 40	18 40	19 40	20 40	21 40	22 40	0 75	2 15	0 76	0 77	0 78	0 79	0 80
16	0 8 00	16 40	17 50	18 50	19 50	20 50	21 50	22 50	23 50	0 80	2 20	0 81	0 82	0 83	0 84	0 85
17	0 8 60	17 10	18 20	19 20	20 20	21 20	22 20	23 20	24 20	0 85	2 25	0 86	0 87	0 88	0 89	0 90
18	0 9 00	18 20	19 30	20 30	21 30	22 30	23 30	24 30	25 30	0 90	2 30	0 91	0 92	0 93	0 94	0 95
19	0 9 60	19 30	20 40	21 40	22 40	23 40	24 40	25 40	26 40	0 95	2 35	0 96	0 97	0 98	0 99	1 00
20	0 10 00	20 40	21 50	22 50	23 50	24 50	25 50	26 50	27 50	1 00	2 40	0 99	1 00	1 01	1 02	1 03
21	0 10 60	21 10	22 20	23 20	24 20	25 20	26 20	27 20	28 20	1 05	2 45	1 01	1 02	1 03	1 04	1 05
22	0 11 00	22 20	23 30	24 30	25 30	26 30	27 30	28 30	29 30	1 10	2 50	1 06	1 07	1 08	1 09	1 10
23	0 11 60	23 30	24 40	25 40	26 40	27 40	28 40	29 40	30 40	1 15	2 55	1 11	1 12	1 13	1 14	1 15
24	0 12 00	24 40	25 50	26 50	27 50	28 50	29 50	30 50	31 50	1 20	3 00	1 16	1 17	1 18	1 19	1 20
25	0 12 60	25 10	26 20	27 20	28 20	29 20	30 20	31 20	32 20	1 25	3 05	1 21	1 22	1 23	1 24	1 25
26	0 13 00	26 20	27 30	28 30	29 30	30 30	31 30	32 30	33 30	1 30	3 10	1 26	1 27	1 28	1 29	1 30
27	0 13 60	27 30	28 40	29 40	30 40	31 40	32 40	33 40	34 40	1 35	3 15	1 31	1 32	1 33	1 34	1 35
28	0 14 00	28 40	29 50	30 50	31 50	32 50	33 50	34 50	35 50	1 40	3 20	1 36	1 37	1 38	1 39	1 40
29	0 14 60	29 10	30 20	31 20	32 20	33 20	34 20	35 20	36 20	1 45	3 25	1 41	1 42	1 43	1 44	1 45
30	0 15 00	30 20	31 30	32 30	33 30	34 30	35 30	36 30	37 30	1 50	3 30	1 46	1 47	1 48	1 49	1 50
31	0 15 60	31 30	32 40	33 40	34 40	35 40	36 40	37 40	38 40	1 55	3 35	1 51	1 52	1 53	1 54	1 55

## PRINCIPAL CLUBS IN INDIA.

Name of Club.	Estab-lished	Club-house.	Subscription.			Secretary.
			Ent	An-nual	Mon-thly.	
			Rs.	Rs.	Rs.	
ABBOTTABAD .. ..	..	Abbottabad, N. W. F. Provinces.	16	..	10	Capt. P. M. Rennie.
ADYAR .. ..	1890	Madras .. ..	75	12	4	F. Buckney
AGRA .. ..	1863	Agra Cantonment ..	50	..	7	Major G. H. C. Wilkins, R. G. A.
AHMEDNAGAR.. ..	1889	.. .. .	32	..	10	Maj. W. Cortlandt Anderson.
AIJAL .. ..	1893	Lushal Hills, E. B. and Assam.	32	..	10	Lt.-Col. G. H. Loch.
AJMERE .. ..	1883	Kaiser Bagh .. ..	50	..	15	E. E. Coupland.
AKOLA .. ..	1870	Berar .. ..	100	..	9	H. C. Greenfield.
ALLAHABAD .. ..	1868	Allahabad .. ..	100	..	9	Capt. G. M. Routh, R. A.
AMRAOTI .. ..	..	.. .. .	100	..	7	W. J. M. Peeble.
AMRITSAR .. ..	1894	Amritsar .. ..	20	..	7	A. Mackay.
BANGALORE UNITED SERVICE.	1868	38, Residency Road ..	100	12	7	Major E. Tennant.
BAREILLY .. ..	1883	Municipal Gardens ..	32	..	9	Capt. W. F. M. Loughman.
BARISAL .. ..	1864	Backerganj, Barisal ..	25	..	12	G. H. W. Davies.
BARRACKPUR .. ..	1850	Grant Trunk Road, S. River Side.	48	..	10	Major G. D. L. Chatterton.
BASSEIN .. ..	1881	Fytche Street, 50, Bassein, Buina.	50	..	10	Comdr. A. Hamilton.
BELGAUM .. ..	1884	Close to Race Course ..	50	..	10	Lt.-Col. J. W. Harley-Lyon.
BENARES .. ..	..	.. .. .	20	..	14	Wilmot C. Dover.
BENGAL .. ..	1827	33, Chowringhee Road, Calcutta.	300	15	13	Col. W. Weallens.
BENGAL UNITED SERVICE.	1845	29, Chowringhee Rd. ..	150	18	10	C. A. Mackenzie.
BOMBAY .. ..	1862	Rampart Row .. ..	100	..	6	H. G. Hichens.
BURMA .. ..	1885	Merchant Street, Rangoon.	50	..	6	F. G. Miller.
BYCULLA .. ..	1833	Bellasis Rd., Bombay.	200	12	10	E. T. H. Mackenzie.
CALCUTTA .. ..	1907	13, Russell Street ..	100	..	..	D. Lindsay & Str Rajendra Nath Mookerjee.
CALCUTTA TURF ..	1861	49, Theatre Road ..	150	25	..	J. Hutcheson.
CAWNPORE .. ..	1844	Cawnpore .. ..	50	8	..	Lieut.-Col. Lawrenson.
CHAMBA .. ..	1891	Dalhousie, Punjab ..	50	..	14	Capt. H. R. Hoods
CHITTAGONG .. ..	1878	Pioneer Hill, Chittagong.	50	..	10	Comdr. E. Gray Mills, R.I.M.
CLUB OF CENTRAL INDIA.	1885	Mhow .. ..	50	..	8	Major Charles T. Lamman.
CLUB OF WESTERN INDIA.	1865	Elphinstone Road, Poona.	200	..	6	Major N. Leslie.
COCHIN .. ..	1876	.. .. .	50	..	5	Frederic A. Cox.
COCONADA .. ..	1867	Coconada .. ..	70	..	10	C. D. T. Shores.
COIMBATORE .. ..	1868	Coimbatore .. ..	50	..	7	E. M. Moss.
COONOR .. ..	1894	Coonor, Nilghis ..	50	12	4	W. Rhodes James.
DACCA .. ..	1864	Dacca .. ..	50	..	14	H. E. Annett.
DARJEELING .. ..	1868	Auckland Road ..	70	..	7	F. M. Timme.
DELHI .. ..	1898	Ludlow Castle, Delhi.	32	..	10	Lt.-Col. D. M. Davidson, I.M.S.
HIMALAYA .. ..	1841	Mussoorie .. ..	100	12	10	R. S. Wahab.
JHANSI .. ..	1887	Next to Public Gardens, Jhansi.	50	..	9-8	Major W. Hallaran, R.A.M.C.

Name of Club.	Established.	Club-house.	Subscription.			Secretary.
			Ent.	Annual	Monthly.	
MADRAS .. ..	1831	Mount Road, Madras.	Rs. 250	Rs. 92	Rs. 10	Captain W. B. F. Davidson.
MADRAS COSMOPOLITAN.	1873	Mount Road .. ..	..	12	36	The Hon. Mr. T. Rangachariar.
MALABAR .. ..	1864	Beach Road, Calicut..	50	12	6	H. Hadow.
MAYMYO .. ..	1901	.....	100	12	10	
MOOLTAN .. ..	1892	Mooltan .. ..	30	..	12	Capt. C. B. Penton.
NAINI TAL .. ..	1864	....	100	..	5	Capt. J. O. Nelson.
OOTACAMUND ..	1840	Ootacamund, Nilgiri Hills.	150	12	5	H. J. Graham.
ORIENT .. ..	..	Chaupatty, Bombay..	150	..	6	C. N. Wadia and Col. J. Lloyd Jones.
PEGU .. ..	1871	Prome Rd., Rangoon.	150	12	..	Capt. B. Stephenson.
PESHAWAR .. ..	1883	Peshawar .. ..	32	..	10	Capt. I. M. Conway Poole.
PUNJAB .. ..	1879	Upper Mall, Lahore ..	150	..	12	A. R. Ross Redding.
QUETTA .. ..	1879	Quetta .. ..	60	..	15	Capt. B. Leicester.
RANGOON GYMKHANA.	1874	Halpin Rd., Rangoon.	75	6	7	W. B. Clover.
RANGOON BOAT CLUB.	..	Royal Lakes, Rangoon.	48	..	3	R. R. Yeomans.
RAJPUTANA .. ..	1880	Mount Abu .. ..	50	48	8	Maj. M. P. Corkery.
ROYAL BOMBAY YACHT.	1880	Apollo Bunder .. ..	250	18	8	G. C. Plinston.
SATURDAY .. ..	..	7, Wood St., Calcutta.	..	..	..	G. Hervey.
SECUNDERABAD ..	1883	Secunderabad, Deccan	100	..	8	W. C. Clark.
SHILLONG .. ..	1878	Northbrook Road, Shillong.	50	..	12	C. H. Holder.
SIALKOT .. ..	..	Sialkot, Punjab ..	32	..	6	Capt. G. S. Rivett-Carnac.
SIND .. ..	1871	Karachi .. ..	200	12	6	W. U. Nicholas.
TRICHINOPOLY ..	1869	Cantonment .. ..	50	..	6	Rev. J. A. Schofield.
TUTICORIN .. ..	1885	Tuticorin .. ..	50	..	8	H. S. Northey.
UNITED SERVICE CLUB	1866	Simla .. ..	200	..	..	Capt. L. R. Vaughan.
UNITED SERVICE CLUB, LUCKNOW.	1861	Chutter Manzil Palace	50	..	8	G. L. Dowbiggin.
UPPER BURMA ..	1889	Port Dufferin, Mandalay	50	..	8	E. D. Haffender.
WESTERN INDIA TURF.	..	Bombay and Poona ..	50	20	..	Maj. J. E. Hughes absent on Military Duty. Ag. Secretary J. Reynolds.
WHEELER .. ..	1863	The Mall, Meerut ..	50	..	9	Captain H. Watts.



## The Church.

In the ordinary acceptance of the term, there is no established Church in India. An Ecclesiastical Establishment is maintained for providing religious ministrations, primarily, to British troops, secondarily to the European civil officials of Government and their families. Seven out of the eleven **Anglican Bishops** in India are officers of the Establishment, though their episcopal jurisdiction far transcends the limits of the Ecclesiastical Establishment. The stipends of the three Presidency Bishops are paid entirely by Government, and they hold an official status which is clearly defined. The Bishops of Lahore, Lucknow, Nagpur and Rangoon draw from Government the stipends of Senior Chaplains only but their episcopal rank and territorial titles are officially recognised. The Bishops of Chota Nagpur, Tinnevely-Madura, Travancore-Cochin, Dornakal and Assam are not on the establishment. The new Bishopric of Assam was created in 1915. In its relations with Government it is subordinate to the see of Calcutta. But the maintenance of the Bishopric is met entirely from voluntary funds.

The ecclesiastical establishment includes four denominations—Anglican, Scottish, Roman and Wesleyan. Of these, the first two enjoy a distinctive position, in that the Chaplains of those denominations (and in the case of the first-named the Bishops) are individually appointed by the Secretary of State and rank as gazetted officers of Government. Throughout the Indian Empire there are 134 Anglican and 18 Church of Scotland chaplains whose appointments have been confirmed. The Roman Catholic and Wesleyans receive block-grants from Government for the provision of clergy to minister to troops and others belonging to their respective denominations. The Wesleyan Methodist Church has a staff of military chaplains in India who receive a fixed salary from Government and 25 chaplains working on a capitation basis of payment by Government. Churches of all four denominations may be built, furnished and repaired, wholly or partly at Government expense.

In the Anglican Communion a movement towards **Synodical Government** was making great progress, when, in the course of the year 1914, serious legal difficulties were encountered. The Bishops were advised that their relations with Canterbury and the Crown precluded the establishment of synods on the basis adopted by the Anglican Church in America, Japan, South Africa and other countries where it is not established by the State. It is stated that in course of time those relations may be modified so as to admit of the establishment of synodical government in India. Meanwhile Diocesan Councils are being adopted as a make-shift measure. These Councils possess synodical characteristics, but are devoid of any coercive power.

So far as the European and Anglo-Indian communities are concerned the activities of the Church are not confined to public worship and pastoral functions. The education of the children of those communities is very largely in the hands of the Christian denominations. There are a few institutions such as the La

Martiniere Schools, on a non-denominational basis; but they are exceptional. In all the large centres there exist schools of various grades as well as orphanages, for the education of Europeans and Anglo-Indians under the control of various Christian bodies. The Roman Catholic Church is honourably distinguished by much activity and financial generosity in this respect. Her schools are to be found throughout the length and breadth of the Indian Empire; and they maintain a high standard of efficiency. The Anglican Church comes next, and the American Methodists have established some excellent schools in the larger hill-stations. The Presbyterians are also well-represented in this field, particularly by the admirable institution for destitute children at Kalimpong, near Darjeeling. Schools of all denominations receive liberal grants-in-aid from Government, and are regularly inspected by the Education Departments of the various provinces. Thanks to the free operation of the denominational principle and its frank recognition by Government, there is no "religious difficulty" in the schools of the European and Anglo-Indian communities.

### Christian Missions.

The tradition that St. Thomas, the Apostle, was the first Christian missionary in India is by no means improbable. History, however, carries us no further back than the sixth century, when a community of Christians is known to have existed in Malabar. Since then the so-called **Syrian Church** in south-west India has had a continuous life. Except in its infancy this Church (or rather these Churches, for the Syrian Christians are now divided into four communions) has displayed little of the missionary spirit until quite recent times. Western Christianity was first introduced into India by the Portuguese, who established their hierarchy throughout their sphere of influence, Goa being the metropolitan see of the Indies. St. Francis Xavier, a Spaniard by race, took full advantage of the Portuguese power in Western India to carry on his Christian propaganda. His almost super-human zeal was rewarded with much success, but many of the fruits of his labour were lost with the shrinkage of the Portuguese Empire. It is really to the work of the missionaries of the **Propaganda** in the 17th century that the Papacy owes its large and powerful following in India to-day. The Roman Catholics in India number 1,904,006, of whom 879,251 were added during the decade 1901-1911. The total of "Syrian" Christians (exclusive of those who while using the Syrian liturgy, are of the Roman obedience) is 315,612, as against 248,741 in 1901. Protestant Christians (the term throughout this article includes Anglicans) number 1,636,731, an increase of 486,986 since 1901. Thus, the total number of Christians of all denominations in India is now close on four millions. In fact it probably exceeds that figure at the present moment, as these statistics are taken from the Census Report of 1911, and the rate of increase during the previous decade was nearly 100,000 per annum.

The Protestant Churches made no serious attempt to evangelise India till the beginning of the nineteenth century. They have thus been at work in the Indian mission field for something over 100 years, and the statistical results of their efforts are given above. It is now, however, generally recognised that Christian missions are producing indirect effects in India which lend themselves only incompletely to any sort of tabulation. The main agency of this more diffusive influence of Christianity is the missionary school and college. The Protestant missions fill a considerable part in the elementary education of the country. According to the *Year Book of Missions in India*, 1912, they are teaching 446,000 children in 13,204 elementary schools, mostly situated in villages. This represents one-ninth of the total of elementary schools and scholars throughout the Empire. The majority of children in these schools are non-Christians. The same is true also of the high schools and in a still greater degree of the colleges. The former number 283 with 62,600 male and 8,400 female pupils. There are 38 colleges affiliated to Universities, containing 5,488 male and 61 female students. Of these as many as 5,241 are non-Christians. From the standpoint of missionary policy much importance is attached to these agencies for the indirect propagation of the Christian faith. The statesman and the publicist are chiefly interested in the excellent moral effect produced by these institutions amongst the educated classes, and the higher educational ideals maintained by their staffs. The principal University colleges under Protestant auspices are the Madras Christian College; the Duff College, Calcutta; the Wilson College, Bombay; and the Foreman College, Lahore. All these are maintained by Presbyterian societies, either British or American. The Roman Catholics have a large number of educational institutions, ranging from small village schools to great colleges preparing students for University degrees. But the proportion of Christian students in their institutions is very much larger than in those of the Protestant bodies. The proportion of literates amongst native Roman Catholics is probably lower than amongst the Protestant converts; but compared with Hindus and Mahomedans it is conspicuously higher. The Roman Catholics have some 3,000 elementary schools in which 98,000 boys and 41,000 girls are receiving instruction. In middle and high schools they have 143,000 boys and 73,000 girls and in University colleges about 5,000 students of both sexes. These figures, however, include a large proportion of Europeans and Eurasians, who are an almost negligible quantity in Protestant mission schools and colleges.

More recent, but producing even more widespread results, is the **Philanthropic work** of Christian missions. Before the great famine of 1878, missionaries confined themselves almost exclusively to evangelistic and educational activity. The famine threw crowds of destitute people and orphan children upon their hands. Orphanages and industrial schools became an urgent necessity. But the philanthropic spirit is never satisfied with one kind of organisation or method. A great

stimulus was also given to medical missions. **Hospitals and dispensaries** have sprung up in all parts of the mission field; and leper asylums are almost a monopoly of Christian missionary effort. In 1911 the total number of medical missionaries working under Protestant societies in India was 118 men and 217 women, the majority of the former being also ordained ministers of religion. There are 184 industrial institutions in which 59 different arts and crafts are taught, ranging from agriculture to type-writing. In this department the **Salvation Army** hold a prominent place; and the confidence of Government in their methods has been shown by their being officially entrusted with the difficult work of winning over certain criminal tribes to a life of industry. The indirect effect of all this philanthropic activity under missionary auspices has been most marked. It has awakened the social conscience of the non-Christian public, and such movements as "The Servants of India" and the mission to the Depressed Classes are merely the outward and visible sign of a great stirring of the philanthropic spirit far beyond the sphere of Christian missionary operations.

### Anglican Missionary Societies.

The Church Missionary Society carries on work in India in seven different missions—the United Provinces, South India, Travancore and Cochin, Bengal, Western India, Punjab and Sind and the Central Provinces and Rajputana. The names are in order of seniority. Work was begun in what are now called the United Provinces in 1813, in the Punjab in 1851, and in the Central Provinces in 1854. The Society has always kept Evangelistic work well to the fore; but it also has important medical missions, especially on the N.-W. Frontier, and many schools of the Primary, Middle and High standards. The Church of England Zenana Missionary Society is an offshoot of the C. M. S. controlling the work of 192 missionary ladies. The number of ordained European missionaries of the C. M. S. in India is 166, European laymen 64 and European lay-women 271. The Society claims a Christian community of 1,85,000 of whom 52,000 are adult communicants.

**Society for the propagation of the Gospel.** Statistics of the work of this Society are not easily ascertained, as much of it is done through Diocesan institutions, which, while financed and in many cases manned by the S. P. G., are entirely controlled by the Diocesan authorities. The best known of the S. P. G. missions is that at Delhi, commonly called the Cambridge Mission to Delhi, carrying on educational work at St. Stephen's College and School. At the College there are about 200 students under instruction, and at the High School 800. The College hostels accommodate 100 students. Missions to the depressed classes exist in Burma, in the Ahmednagar District and in several parts of South India, especially in the Diocese of Tinnevely-Madurai. There are 1,16,000 Indian Christians under the aegis of the S. P. G.; 90 ordained European missionaries and 98 European lady workers.

**Other Anglican Societies.**—The Oxford Mission to Calcutta was started in 1880.

It works in the poorest parts of Calcutta and also at Barisal. There are 11 mission-priests of this Society, and 16 Sisters. In addition to its work amongst the poor, the Oxford Mission addresses itself to the educated classes in Bengal and issues a periodical called *Epiphany*, which is known all over India.

The Society of St. John the Evangelist (commonly known as the Cowley Fathers) has houses at Bombay and Poona, and small stations in the Bombay Konkan. In Bombay its missionary work centres round the Church of Holy Cross, Umarnadi, where there is a school and a dispensary. The Christians are chiefly drawn from the very poorest classes of the Bombay

population. At Poona the Society co-operates with the Wantage Sisters and in Bombay with the All-Saints Sisters. Other Anglican sisterhoods represented in India are the Clewer Sisters at Calcutta and the Sisters of the Church (Kilburn) at Madras. The St. Hilda's Deaconesses' Association of Lahore carries on important educational work (chiefly amongst the domiciled community) in the Punjab. The mission of the Scottish Episcopal Church at Nagpur, the Dublin University Mission at Hazaribagh, and the Mission of the Church of England in Canada working at Kangra and Palampur (Punjab) should also be mentioned under the head of Anglican Missions.

### Bengal Ecclesiastical Department.

Lefroy, Most Reverend George Alfred, D.D. .. Lord Bishop of Calcutta and Metropolitan of India.

#### SENIOR CHAPLAINS.

Stokoe, Rev. Cecil George, M.A. .. .. Services, placed at the disposal of Government of Bihar and Orissa.  
 Firminger, Ven'ble Walter Kelly, M.A., B.D. .. Archdeacon of Calcutta. Services placed at the disposal of Government of Assam.  
 Stuart, Rev. Robert William Hall, B.A. .. St. Paul's Cathedral, Calcutta.  
 Smith, Rev. Joseph Frank, B.A., A.K.C. .. Services placed at the disposal of the Government of Bombay.  
 Keeling, Rev. Ernest William Phillips, B.A. .. Fort William.  
 Drawbridge, Rev. W. H., M.A. .. .. On combined leave.

And 11 Junior Chaplains.

#### CHAPLAINS OF THE CHURCH OF SCOTLAND.

Thomson, Rev. William, M.A. .. .. Presidency Senior Chaplain. On combined leave.  
 Gillan, Rev. D. H. .. .. Senior Chaplain (on privilege leave).  
 Jamieson, Rev. Robert George, B.A. .. Officiating Presidency Senior Chaplain.

#### CHAPLAINS OF THE CHURCH OF ROME.

Meuleman, The Most Reverend Dr. Brice, S.J. .. Archbishop.  
 Carbery, Rev. Fr. Philip, S.J. .. .. Chaplain, Presidency Jail.

### Bombay Ecclesiastical Department.

Palmer, Right Reverend Edwin James, M.A. .. Lord Bishop of Bombay.  
 Barham, Rev. C. M., M.A. (on leave for 3 months from December). .. Archdeacon of Bombay and Bishop's Commissary.  
 Bowen, John Cuthbert Grenside .. .. Registrar of the Diocese.

Coles, Rev. A. H. .. ..	} Honorary Canons of Bombay Cathedral,
Heywood, Rev. R. S. .. ..	
Joshi, Rev. D. L. .. ..	
King, Rev. C. .. ..	
Rivington, Rev. C. S. .. ..	

#### SENIOR CHAPLAINS.

Courtice, Rev. George Robert Aulton, M.A., B.S.C. .. Belgaum.  
 Foote, Rev. Harold .. .. Camp, Aden.  
 D'Alessio, Rev. Edward Samuel John, B.A. .. On furlough.  
 deCoetlogon, Rev. Charles Evelyn Cambridge, M.A. .. On furlough.  
 Mould, Rev. Horace .. .. St. Mary's, Poona.  
 Kennelly, Rev. W. J. M. .. .. St. Paul's, Poona.

And 17 Junior Chaplains.

#### CHAPLAINS OF THE CHURCH OF SCOTLAND.

Matthew, Rev. John Cronbie, M.A., B.D. .. Senior Presidency Chaplain.

And 3 Junior Chaplains,

#### CHAPLAINS OF THE CHURCH OF ROME

Bruder, The Very Rev. A. .. .. Presidency.

### Madras Ecclesiastical Department.

Whitehead, Right Reverend Henry, D.D.	..	..	Lord Bishop of Madras. (On leave.)
Cox, Ven'ble Lionel Edgar, M.A.	..	..	Archdeacon and Commissary and Domestic Chaplain to the Lord Bishop.
Rowlandson, Frederic, B.A., LL.B.	..	..	Registrar of the Diocese and Secretary to the Lord Bishop.

#### SENIOR CHAPLAINS.

Breay, Rev. Christopher Francis, M.A.	..	..	St. Thomas' Mount.
Bull, Rev. Edmund	..	..	Services placed at the disposal of the Government of India, Army Department.
Giles, Rev. Clement Douglas, M.A.	..	..	Fort St. George.
Flynn, Rev. Hugh Hamilton	..	..	Cleonada.
Hatchell, Rev. Christopher Frederic Wellesley, M.A.	..	..	St. John's, Bangalore.
Heycock, Rev. Francis Wheaton, M.A.	..	..	Mercara and Mysore.

And 24 Junior Chaplains.

#### CHURCH OF SCOTLAND.

Heron, Rev. John, M.A., B.D.	..	..	Presidency Senior Chaplain, St. Andrew's Church, Madras. (On combined leave.)
Meldrum, Rev. Neil, M. A., B. D.	..	..	St. Andrew's Church, Madras.
Phillip, Rev. James Gibson	..	..	St. Andrew's Church, Bangalore
Mitchell, Rev. James Donald, M.A., B.D.	..	..	Junior Chaplain, St. Andrew's Church, Secunderabad

### Assam Ecclesiastical Department.

Firminger, Ven'ble W. K., M.A., B.D.	..	..	Shillong.
Wilcox, Rev. F. B., B.A.	..	..	Darrang.
Cosserat, Rev. N. W. P., B.A.	..	..	Lakhimpur.
Kendrick, Rev. G. V.	..	..	Sibsagat.
Vacant	..	..	Silchar.

### Bihar and Orissa Ecclesiastical Department.

Stokoe, Rev. C. G., M.A.	..	..	..	Senior Chaplain. (On combined leave.)
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#### JUNIOR CHAPLAINS.

Thomson, Rev. Thomas Albert	..	..	..	Cuttack.
Perfect, Rev. Henry	..	..	..	Bhagalpur.
Green, Canon Arthur Daniel	..	..	..	Monghyr and Jamalpur.
Payne, Rev. Russell, M.A.	..	..	..	Muzaffarpur and Darbhanga.
Cosgrave, Canon W. F.	..	..	..	Ranchi.
Moore, Rev. H. M.	..	..	..	Bankipore and Dinapore
Spooner, Rev. Harold	..	..	..	Services placed at the disposal of the Government of India, Army Dept.

### Burma Ecclesiastical Department.

Fyfe, The Right Reverend Rolleston Sterritt, M.A.	..	..	..	Lord Bishop of Rangoon.
Cory, Ven'ble Charles Page, M.A.	..	..	..	Archdeacon and Bishop's Commissary.

#### SENIOR CHAPLAINS.

Blandford, Rev. Henry Weare, B.A.	..	..	..	Maymyo.
Collins, Rev. James Henry	..	..	..	Thayetmyo.
Seeley, Rev. George Henry	..	..	..	Rangoon Cantonments.
Ellaby, Rev. George Alfred, B.A.	..	..	..	Shwebo.

And 5 Junior Chaplains.

### Central Provinces Ecclesiastical Department.

Chatterton, Right Reverend E., D.D.	.. ..	Lord Bishop of Nagpur. On foreign service.
Price, Ven'ble C., M.A.	.. ..	Archdeacon and Bishop's Commissary in charge of the Diocese. Chaplain of Fakh-mari.

#### SENIOR CHAPLAINS.

Darling, Rev. C. W., M.A.	.. ..	On combined leave.
Anstey, Rev. H. C. S., M.A.	.. ..	Nasirabad.
Clarke, Rev. W. L., M.A.	.. ..	Saugor.

And 11 Junior Chaplains.

### North-West Frontier Ecclesiastical Department.

#### SENIOR CHAPLAIN.

Muspratt, Rev. W., M.A.	.. ..	Hazara.
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And 3 Junior Chaplains.

### Punjab Ecclesiastical Department.

Durrant, Right Reverend H. B., M.A., D.D.	.. ..	Lord Bishop of Punjab, Lahore
Warlow, The Ven'ble Edmund John, M.A.	.. ..	Archdeacon (Simla).
Ihsan Ullah, The Ven'ble	.. ..	Archdeacon, Lahore (Un-official).

#### SENIOR CHAPLAINS.

Becker, Rev. Charles Maxwell, M.A.	.. ..	On combined leave.
Syme, Rev. James Greensill Skottowe, M.A.	.. ..	Kashmir.
Brookes, Rev. Joshua Alfred Rowland, M.A.	.. ..	Quetta.
Stanley, Rev. Albert Edward, M.A.	.. ..	Multan.
Muspratt, Rev. Walter, M.A.	.. ..	Hazara.
Stewart, Rev. Charles, B.A.	.. ..	Hyderabad (Sind).
Hickox, Rev. Sydney Ernest	.. ..	Sukker. On special duty.
Foster, Rev. Kenric George	.. ..	Lahore Cantonment.
Cole, Rev. A. B. Farquharson	.. ..	Rawalpindi.
Markby, Rev. F. E.	.. ..	Murree (Further Gulis).
Thomas, Rev. F. S.	.. ..	Ferozepore.
Wheeler, Rev. Hugh Trevor	.. ..	Serving under Government of India.

And 23 Junior Chaplains.

### United Provinces Ecclesiastical Department.

Wescott, The Right Reverend George Herbert	.. ..	Lord Bishop of Lucknow.
Chapman, The Ven'ble Percy Hugh, M.A., LL.D.	.. ..	Archdeacon of Lucknow.
Pearson, H. G., Bar-at-Law	.. ..	Registrar of the Diocese of Lucknow. On leave out of India.
Hechle, H. T.	.. ..	Officiating Registrar of the Diocese of Lucknow.

#### SENIOR CHAPLAINS.

Shaw, Rev. Walter Lilley Pritchatt, M.A.	.. ..	Landour.
Johnson, Rev. Percy James Debenham, B.A.	.. ..	On combined leave on medical certificate.
Oldham, Rev. George Ernest, M.A.	.. ..	Roorkee. (On combined leave.)
Canney, Rev. Duncan Arnold	.. ..	Cawnpore.
Menzies, Rev. Henry, M.A.	.. ..	Lucknow.
Ninis, Rev. Richard Duncan	.. ..	Services placed at the disposal of the Government of India, Army Department.
Smith, Rev. H. T. P.	.. ..	Fyzabad.
Bell, Rev. William Lachlan, M.A.	.. ..	Services placed at the disposal of the Government of India, Army Department.
Kitching, Rev. W. L. W.	.. ..	Allahabad (Civil). On combined leave.
Martin, Rev. Frederick Walter	.. ..	Banikhet.

And 13 Junior Chaplains with 8 Additional Clergy.

### CHURCH OF SCOTLAND.

Two Junior Chaplains.

## THE ROMAN CATHOLIC CHURCH.

With regard to numbers, the *Catholic Directory of India*, 1918, gives the following discrepant tables :—

		Civil Census 1911.	Ecclesiastical Estimate.
British India	{ Latin rite .. .. .	1,430,582	1,535,820
	{ Syriac rite .. .. .	413,142	364,660
Total, British India and Prot. States .. .. .		1,843,724	1,900,480
Burma .. .. .		60,282	88,447
Ceylon .. .. .		339,300	322,163
Total, India, Burma and Ceylon .. .. .		2,243,306	2,311,090
French India .. .. .		....	25,918
Portuguese India .. .. .		....	296,148
Ecclesiastical Grand Total .. .. .		....	2,663,156*

\* After trying to rectify discrepancies the *Directory* fixes as probable the following numbers :—  
 European and Eurasian Catholics .. .. . 114,512  
 Baptised Native Catholics .. .. . 2,423,286

Total .. 2,537,798

The Catholic community as thus existing is composed of the following elements :—

(1) The "Syrian" Christians of the Malabar Coast, traditionally said to have been converted by the Apostle St. Thomas. They were brought under allegiance to the Pope by the Portuguese in 1599, and placed first under Jesuit bishops and then under Carmelite Vicars Apostolic. They are at present ruled by four Vicars Apostolic of their own Syriac rite.

(2) Converts of the Portuguese missionaries from 1500 and onwards, starting from Goa and working in the south of the peninsula and up the west coast and in Ceylon.

(3) European immigrants at all times, including British troops.

(4) Modern converts from Hinduism and Animism in recent mission centres.

The Portuguese mission enterprise starting after 1500, continued for about 200 years, after which it began to decline. To meet this decline fresh missionaries were sent out by the Congregation *de propaganda fide*, till by the middle of the 19th century the whole country was divided out among them except such portions as were occupied by the Goa clergy. Hence arose a conflict of jurisdiction in many parts between the Portuguese clergy of the "padroado" or royal patronage, and the propaganda clergy. This conflict was set at rest by the Concordat of 1886. At the same time the whole country was placed under a regular hierarchy, which after subsequent adjustments now stands as follows :—

#### Of the Portuguese Jurisdiction :—

The archbishopric of Goa (having some extension into British territory) with suffra-

gan bishoprics at Cochin, Mylapore and Daman (all three covering British territory).

#### Of the Propaganda Jurisdiction :—

The archbishopric of Agra with suffragan bishoprics of Allahabad and Rajputana and the Prefecture Apostolic of Bettiah.

The archbishopric of Bombay, with suffragan bishoprics of Poona, Mangalore and Trichinopoly.

The archbishopric of Calcutta, with suffragan bishoprics of Dacca and Krishnagar, and the Prefecture Apostolic of Assam.

The archbishopric of Madras, with suffragan bishoprics of Hyderabad, Vizagapatam and Nagpur.

The archbishopric of Pondicherry (French) with suffragan bishoprics of Mysore, Coimbatore and Kumbakonam.

The archbishopric of Simla with suffragan bishopric of Lahore and the Prefecture Apostolic of Kashmir.

The archbishopric of Colombo (Ceylon) with suffragan bishoprics at Kandy, Galle, Jaffna and Trincomalee.

The archbishopric of Verapoly, with suffragan bishopric of Quilon.

Four Vicariates Apostolic of the Syriac rite for the Thomas Christians of Malabar.

Three Vicariates Apostolic of Burma.

The European clergy engaged in India almost all belong to religious orders, congregations or mission seminaries, and with a few exceptions are either French, Belgian, Dutch, Swiss, Spanish or Italian by nationality. They

number about 1,000 besides which there is a body of secular clergy mostly native to the country, numbering about 2,000 and probably about 2,000 nuns. The first work of the clergy is parochial ministrations to existing Christians, including railway people and British troops. Second comes education, which is not confined to their own people; their schools being frequented by large numbers of Hindus, Mahomedans, Parsis, etc. Among the most important institutions are St. Xavier's College, Calcutta, St. Peter's College, Agra, St. Xavier's College, Bombay, St. Joseph's College, Trichinopoly, St. Aloysius College, Mangalore, teaching university courses; besides a large number of high schools and elementary schools. The education of girls is supplied for by numerous convent schools worked by religious congregations of nuns to say nothing of orphanages and other charitable institutions. The total number under education amounted in 1904 to 143,051 boys and 73,164 girls, later figures being unavailable.

As to missionary work proper, the country is covered with numerous mission centres,

among which those in Chota Nagpur, Gujerat, Orissa, the Nizam's Dominions, the Ahmednagar district and the Telugu coasts may be mentioned. (Full particulars on all points will be found in the Catholic Directory already quoted.) The mission work is limited solely by shortage of men and money, which if forthcoming would give the means to an indefinite extension. The resources of the clergy after the ordinary church collections and pay of a few military and railway chaplains are derived mainly from Europe, that is, from the collections of the *Society for the Propagation of the Faith* and of the *Holy Childhood*, helped out by private or other donations secured from home by the different local missionaries. In mission work the fathers count as enrolled only those who are baptised and persevering as Christians, and no baptism, except for infants or at point of death, is administered except after careful instruction and probation. This, while keeping down the record, has the advantage of guaranteeing solid results.

## THE SCOTTISH CHURCHES.

**THE CHURCH OF SCOTLAND**—The Chaplaincy work of the Church of Scotland dates from 1814, when the Rev. Dr. Bryce landed in Calcutta, and organised a congregation of his Scottish fellow countrymen. Since 1903 there have been eighteen chaplains on the staff, of whom nine belong to the Bengal Presidency, five to Bombay, and four to Madras. These minister both to the Scottish troops and to the civil population of the towns where they are stationed, but when there is a Scottish regiment the chaplain is attached to the regiment, instead of being posted to the station where the regiment happens to be placed and as a rule moves with the regiment. There are three Presidency senior Chaplains in charge of Bengal, Bombay, and Madras respectively. There are churches in the chief towns of the Presidencies, and churches have also been built, or are being built, in all considerable military stations, e.g., Chakrata, Lucknow, Peshawar, Ranikhet, Rawalpindi, Sialkot and Umballa. In addition to the regular establishment there are a number of acting Chaplains sent out by the Colonial Committee of the Church of Scotland, and these are serving in such stations as Rawalpindi, Cawnpore, Meerut, Mhow, and Quetta. The additional clergy societies in India contribute towards the cost of this additional establishment. In other places such as Sialkot, Murree, Dalhousie, Darjeeling and Lahore, regular services are provided by Scottish Missionaries. Simla has a minister of its own sent out from Scotland.

The Mission work of the Church of Scotland dates from 1820, when Alexander Duff, one of the greatest of modern missionaries, was sent to Calcutta. He was the first to open schools where English was made the medium for instruction, and where religious teaching was given daily. Similar educational missions were soon afterwards started in Bombay and Madras. Educational work is still an important branch of the mission work of the Church, but the Bombay College was closed in 1891

and in 1907 the College in Calcutta was united with the College of the United Free Church of Scotland, to form the "Calcutta Christian College." In the Punjab Evangelistic work is being carried on from eight centres under seventeen missionaries. The baptised Christian community now numbers almost 13,000. Work commenced in Darjeeling in 1870 is now carried on throughout the whole Eastern Himalayan district, and there is a Christian community there of over six thousand. In the five mission districts of Calcutta, the Eastern Himalayas, Madras, Poona, and the Punjab there were at the end of 1914 over 21,000 baptised Indian Christians. In connection with these missions the Women's Association of Foreign Missions does invaluable service in school, medical and zenana work, having in India 48 European missionaries, 143 teachers, over 60 schools, three hospitals and six dispensaries.

The Church of Scotland has also done much to provide education for European children in India. Together with the United Free Church St. Andrew's Church provides the governing body of the Bombay Scottish High Schools, which have always held a high place among such institutions, and exercises pastoral supervision over the Bombay Scottish Orphanage. In Bangalore there is the St. Andrew's High School, and both in Bangalore and in Madras the local congregation supports a school for poor children. The now well-known St. Andrew's Colonial Homes at Kalimpong, Bengal, though not directly part of the work of the Church of Scotland, were initiated by and are being locally managed by Missionaries of that Church. The homes exist for the benefit of the domiciled European Community, and are doing magnificent work. There are now fifteen cottages, and 437 children in residence. Further information may be found in "Reports of the Schemes of the Church of Scotland," Blackwood & Sons; "The

Church of Scotland Year Book" and "The Handbook of the Church of Scotland in India and Ceylon."

**THE UNITED FREE CHURCH OF SCOTLAND.**—This branch of the Scottish Church has only three purely European congregations in India, two in Calcutta, Wellesley Square, and one in Bombay, Waudby Road. As noted above members of these congregations co-operate with the Established Church of Scotland in providing education for European children. In Calcutta a second congregation is maintained at Howrah in the district of the mills, and every effort is made to minister to the Scottish engineers and other workers in the mills.

The Mission work of the Church is extended and varied. It is carried on in seven centres—in Bengal; in Santalia, with five stations; in Western India, including Bombay, Bombay District and Poona; in Hyderabad State including Jalna and Bethel; in Madras, with four stations; in the Central Provinces, including Nagpur, Nagpur District, Bhandara, Wardha and Amraoti; and in Rajputana where since 1,800 missions have been established in eleven districts.

There are at work in these centres 212 Scotch missionaries, together with a native staff of 311. Of organised Indian congregations there are 41, comprising 4,813 communicant members, and representing a Christian community of 13,749. Of schools there are 336 with 815 teachers and 14,494 scholars. A large part of this work is organised and supported by the women of the Church who have sent out as many as 81 of these missionaries. In connection with the medical work of the mission there are 19 hospitals where in the year 480,090 out-patients and 8,435 in-patients are treated, all of whom are brought under Christian instruction. There are four great missionary Colleges. There is the Madras Christian College, with 839 students, which reached its great success under the wise leadership of the Rev. Dr. William Miller, and which is now contributed to by five other Missionary Societies as well as that of the United Free Church. Representatives of these Missions, which include the C. M. S. and the Wesleyan Missionary Society, sit upon the College Board. There is the Scottish Christian College in Calcutta, with over 1,152 students, the Hishop College at Nagpur with 505 students, and the Wilson College in Bombay with 1,047 students.

## BAPTIST SOCIETIES.

**THE ENGLISH BAPTIST MISSIONARY SOCIETY.**—Formed in 1792, largely through the efforts of Dr. Wm. Carey, operates mainly in Bengal, Bihar, the United Provinces, the Punjab, and Ceylon. The Baptist Zenana Mission has recently been united with this Society. The staff of the united Mission numbers 252 missionaries and about 1,000 Indian workers. Connected with the Society are 210 Indian Churches, 307 Day Schools, 14 Middle and High Schools, and 3 Theological Training Colleges. The Church membership at the close of 1915 stood at 12,125 and the Christian Community at 34,441. In the methods of the Society, the chief place is given to Bazaar and Village preaching. Increase in membership during the past ten years, about 30 per cent. and in the community 50 per cent. for the same period. Amongst the non-caste people great progress has been made in recent years, and Churches formed from amongst these peoples are self-supporting.

Special work amongst students is carried on in Calcutta, Dacca, Bankipore, Cuttack and Delhi, where Hostels have been erected for the prosecution of this form of work.

**EDUCATIONAL WORK.**—Ranges from Primary School to Colleges. Serampore College, the only College in India able to bestow a theological degree granted under Royal Charter by His Danish Majesty in 1827, and confirmed by the British Government in the Treaty of purchase of the Settlement of Serampore in 1845, and placed in 1856 by the College Council at the disposal of the Baptist Missionary Society to become a part of its Missionary Educational operations, Arts and Theological. It was affiliated in 1857 to the newly-formed Calcutta University; reorganised in 1910 on the lines of its original founda-

tion with the appointment of a qualified Theological Staff on an interdenominational basis for the granting of Theological Degrees to qualified students of all Churches.

As the only College in India granting a Theological Degree a large number of students are now resident in the splendid College Buildings. In Arts, the College prepares for the Calcutta Arts Examinations. *Principal*: Rev. G. Howells, M.A., B.D., R.LITT., PH. D.

A Vernacular Theological Institute, and High School likewise attaches to Serampore, as also at Delhi and Cuttack, for the training of native preachers.

There are 9 or 10 purely English Baptist Churches connected with the Society, but English services are carried on in many of the stations where an European population obtains. Medical work connected with the Society reported 5 Hospitals, 12 Dispensaries, 1,023 in patients, and 45,414 out-patients for the year 1915. Two large Printing Presses for both English and Vernacular work are conducted at Calcutta and Dacca. The Secretary of the Mission is the Rev. Herbert Anderson, 48, Ripon Street, Calcutta.

**WOMEN'S MISSIONARY ASSOCIATION, B.M.S.**—Extends over the same area practically as the above; there are 70 missionaries, 395 Indian Workers, 102 Girls' Day Schools, and 5 Girls' Boarding Schools in connection with this work; 751 villages are visited annually by Teachers and Missionaries engaged in Gospel work. A large place is given to medical work, 5 Hospitals with qualified staffs and 11 Dispensaries providing for 1,000 in-patients, and 68,000 out-patients for the past year. The Indian General Secretary of the Women's Missionary Association of the Baptist Missionary Society is Miss Angus, 44, Lower Circular Road, Calcutta.



**THE CANADIAN BAPTIST MISSION.**—Was commenced in 1873, and is located in the Eastern Telugu District to the north of Madras, in the Kistna, Godavari, Vizagapatam, and Ganjam Districts. There are 22 stations and 180 out-stations with a staff of 89 missionaries, including 7 qualified physicians, and 615 Indian workers, with Gospel preaching in villages. Organized Churches number 64, communicants 9,855 and adherents 9,864 for the past year. Eleven Churches are entirely self-supporting. In the Educational department are 243 village Day schools, with 7,287 children, 3 Boarding schools, 2 High schools, a Normal Training school, a Theological Seminary providing in all for 825 pupils, and an Industrial school. There are 6 Hospitals and two leper asylums. The Mission publishes a Telugu newspaper Village Evangelisation is the Central feature of the Mission, and stress is laid upon the work amongst women and children in particular. During the last decade membership has increased by 68 per cent., the Christian Community by 50 per cent., and scholars by 500 per cent. The Indian Secretary is the Rev. A. A. Scott, Tunli, Godavari District.

**THE AMERICAN BAPTIST TELUGU MISSION.**—Was commenced in the year 1833, and covers large parts of Nellore, Guntur, Kistna, and Kurnool Districts, and parts of the Deccan. Its main work is evangelism, but there is large Educational and Medical work in addition. There is an English Church in Madras. A large industrial Yerakala settlement is carried on at Kavali under the charge of one of the missionaries. Organized Telugu Churches, number 163, with 70,222 baptised communicants. There has been a net increase of 1,000 per annum for the past twenty years. There are 130 Missionaries and 1,861 Indian Workers. There is a large Theological Seminary at Ramapatnam for the training of Indian preachers and a Bible School at Vinukonda for training Bible Women. In ordinary educational work 769 day schools, 26 Boarding Schools and 4 High Schools give training to 25,179 scholars. In Medical work 6 Hospitals report 1,586 in-patients and 19,583 out-patients for the year.

*Corresponding Secretary:* Prof. L. E. Martin, Ongole, Guntur District.

**AMERICAN BAPTIST FOREIGN MISSION SOCIETY,** organized in 1814, has Missions in Burma begun 1814; Assam 1836; Bengal and Orissa 1836; South India 1840. It owes its rise to the celebrated Adoniram Judson. Until 1910 the Society was known as the American Baptist Missionary Union. There are 31 main stations in Burma, 13 in Assam, 9 in Bengal and Orissa, 29 in South India, besides hundreds of out-stations. All forms of missionary enterprise come within the scope of the Society.

The missionary staff numbers 398 in all, with an Indian workers' staff of 4,834. Communicants number 155,063. Organized churches number 1,359 of which 860 are self-supporting. Educational work is conducted on a large scale, the total number of schools of all grades being 1,952 with over 65,000 pupils. The Christian College has 74 students in college classes. There are ten High Schools with 2,562 pupils.

Medical work embraces 18 Hospitals and 35 Dispensaries, in which 78,020 out-patients and 1,832 in-patients were treated last year.

Indian Christians contribute annually more than Rs. 1,40,000 for religious and benevolent work within the Mission.

The great work of the Mission continues to be evangelistic and the training of the native preachers and Bible-women, and extends to many races and languages, the most important of which, in Burma, has been the practical transformation of the Karens, whose language has been reduced to writing by the Mission. The work in Assam embraces 9 different languages, and large efforts are made amongst the employers on the tea plantations. The Mission Press at Rangoon is the largest and finest in Burma.

*Assam Secretary,* Rev. Judson Tuttle, Gauhati, Assam.

*Burma Secretary,* Rev. H. J. Marshall, Tharrawaddy, Burma.

*Bengal and Orissa Secretary,* Rev. Howard R. Murphy, M.D., Midnapore, Bengal.

*South India (or Telugu) Secretary,* Rev. W. A. Stanton, D.D., Kurnool, Kurnool District, S. India.

**THE TASMANIAN BAPTIST MISSION.**—With 3 missionaries, is established at Siragunge, E. Bengal.

*Secretary:* Rev. F. T. Thompson, Mission House, Siragunge.

**THE AUSTRALIAN BOARD OF BAPTIST FOREIGN MISSIONS.**—Embracing the societies representing the Baptists of the States of the Australian Commonwealth. The field of operations is in East Bengal. The staff numbers 36 Australian workers. There are 1,461 communicants and a Christian community of 2,870.

*Secretary Field Council:* Rev. Hedley Sutton, M.A., Mission House, Mymensingh.

**THE STRICT BAPTIST MISSION.**—Has 10 Missionaries, and 86 Indian Workers in Madras, W. and the Trichy District. Communicants number 140; organized Churches 4; Elementary schools 25, with 1,200 pupils.

*Secretary:* Rev. E. A. Booth, KMPauk, Madras, W.

**AMERICAN BAPTIST, BENGAL-ORISSA MISSION** commenced in 1836. Area of operation, Midnapore and Balasore districts of Lower Bengal. Mission staff 29, Indian workers 264. One English Church and 24 Vernacular Churches, Christian Community 5,000. One hospital and two dispensaries. Educational: One Theological and one High School, and 150 Elementary schools, pupils 4,880. Two industrial schools for weaving and carpentering, &c. The Vernacular Press of this mission printed the first literature in the Santali language.

*Secretary:* Rev. Howard R. Murphy, M.D., Midnapore

## PRESBYTERIAN SOCIETIES.

**THE IRISH PRESBYTERIAN CHURCH MISSION.**—Operates in Gujarat and Kathiawar with a staff of 36 Missionaries of whom 3 are qualified doctors and an Indian staff of 560 including school teachers. There are 25 Organised Churches, a communicant roll of 1,559, and a Christian community of 5,716. In Medical work there are 2 Hospitals, 5 Dispensaries, with 966 in-patients and 22,287 out-patients. The Mission conducts 3 High schools, 3 Anglo-Vernacular schools, and 136 vernacular schools affording tuition for 6,86 pupils, 5 Orphanages, a Divinity College at Ahmedabad, a Teachers' Training College for men, a Teachers' Training College for women, both at Ahmedabad, and a Mission Press at Surat. The Mission has made a speciality of farm colonies, of which there are about a score in connection with it, most of them thriving.

The Jungle Tribes Mission with 4 missionaries is a branch of the activities of the above, working in the Panch Mahals and Rewa Kantha districts, with farm colonies attached.

*Secretary:* Rev. R. R. Johnson, B.A., Mission House, Ahmedabad.

**THE UNITED PRESBYTERIAN CHURCH OF N. AMERICA.**—Sialkot Mission was established in 1856 operating in the extreme North of the Punjab, and is practically the only Mission working amongst the 9,374 cities and villages of that district. Its missionaries number 78, Indian workers 718. There are 60 organised congregations with 499 outstations, a membership of 32,307, and a Christian community of 61,064. Women's Societies number 29. A theological seminary and a college, 4 high schools, 7 middle schools, 2 industrial schools, 2,220 primary schools, containing in all 12,316 pupils. In medical work there are 4 hospitals and 7 dispensaries with 1,626 in-patients and 55,476 out-patients for 1914.

*Secretary:* Rev. R. Maxwell, Gujranwala.

**THE AMERICAN PRESBYTERIAN MISSION** operates in 3 main sections known as the Punjab, North India and Western India Missions. The American Staff numbers 193 and Indian Staff 1,223. There are 29 main stations and 181 out-stations. Organized churches number 57, 15 of which are self-supporting. There are 8,724 communicants and a total baptized community of 55,552. Educational work as follows: 3 Christian Colleges, students, 1,237; Theological School 1, students 47; Training Schools for village workers 2, students 209; High Schools 15, pupils 1,030; Industrial Schools 4, pupils about 150; Agricultural Demonstration Farms 4, students about 100; Teachers' Training Departments 7, students about 100; Medical students at Miraj 61; Elementary Schools 837; Schools of all grades 361, pupils 13,381. Medical Work: Hospitals 7; Dispensaries 12; in-patients 4,005; out-patient visits 133,669. Sunday Schools 384, with 2,023 pupils. Contributions for Church and Evangelistic work on the part of the Indian Church Rs. 20,232. Total Indian contributions or all purposes, including educational and medical fees and grants Rs. 4,71,411.

The Hospital at Miraj, under the care of Dr. W. J. Wanless and Dr. C. E. Vail is well known

throughout the whole of S. W. India, and the Forman Christian College at Lahore under the principalship of Rev. J. C. R. Ewing, D.D., C.I.E., is equally well-known and valued in the Punjab. The Allahabad Christian College (Dr. C. A. R. Janvier, Principal) is growing rapidly and its agricultural department has become increasingly prominent. Woodstock College for Women at Mussorie, Principal Miss A. Mitchell, M.D., is one of the largest and most valuable institutions of this description in Northern India.

*Secretary of Council of A.P. Missions in India:* Rev. H. D. Griswold, Ph. D., D.D., Saharanpur.

*Secretary, Punjab Mission:* Rev. E. D. Lucas, Lahore.

*Secretary, North India Mission:* Rev. R. C. Smith, Fatehpur, Haswa.

*Secretary, Western India Mission:* Rev. H. G. Howard, Kodoli, S.M.C.

**THE NEW ZEALAND PRESBYTERIAN MISSION.**—Commenced as recently as 1910 at Jagadhri, Punjab.

*Secretary:* Miss A. E. Henderson, Jagadhri.

**THE CANADIAN PRESBYTERIAN MISSION.**—Commenced in 1877, has 14 main Stations in the Indore, Gwalior, Rutlam, Dhar, Alirajpur, Jaora, Sitamau, Banswara, &c. Native States.—The Mission staff numbers 73, Indian workers 219, Organized Churches 13, Communicants (September 30, 1915) 1,048, Baptised non-communicants 1,964, Unbaptised infants and catechumens 11. Educational work comprises Elementary and Middle Schools, High School for boys and girls, College, Theological Seminary and Classes. Industrial teaching and work are done in three Girls' Orphanages, in the Women's Industrial Home, and at Basal-pura which last includes the Mission Press and the School for the blind. The Medical work is large, chiefly among women.

*Secretary:* Rev. J. Fraser Campbell, D.D., Rutlam, C. I.

**THE GERMAN EVANGELICAL SYNOD OF NORTH AMERICA.**—Commenced work in the C. P. in 1865. The mission staff numbers 23; Indian Christian workers 310; Communicants 1,815; total Christian community 4,608; Organized Churches 6, one Theological school with 10 students; one High School with 90 students and 64 other schools with 3,956 students. The mission has 2 Hospitals and 6 Dispensaries which in 1914 treated 18,013 patients.

*Secretary:* Rev. F. A. Goetsch, Bismarapur.

**THE WELSH CALVINISTIC METHODIST MISSION (OR WELSH PRESBYTERIAN MISSION)** established in 1840 with a staff of 32 Missionaries, 600 Native workers, occupies stations in Assam in the Khassia and Jaintia Hills, the Lushai Hills and at Sylhet and Cachar. The Khassia language has been reduced to writing, the Bible translated, and many books published in that language by the Mission. Communicants number 14,000, the total Christian community 42,000; organized Churches 450; self-supporting Churches 30. Elementary schools number 510, scholars 15,000; Boarding

schools 8, scholars 820, in addition to 1 Industrial school, 4 Training institutions and 1 Theological Seminary. Two Hospitals and 3 Dispensaries provided for 10,000 patients in 1914.

*Secretary:* Rev. J. Ceredig Evans, Shillong.

**THE ARCOT MISSION** of the Reformed Church in America (Dutch), organised in 1853 occupies the Arcot and Chittoor districts in S. India with a staff of 29 Missionaries, and 604 Indian ministers and workers. Churches

number 19, Communicants 8,986, total Christian community 11,298; Boarding schools 11, scholars 528; Theological school 1, students 37; High schools 4, scholars 1,219; Training schools 2, students 44; Industrial schools 2, pupils 95; Elementary schools 181, scholars 6,945. Three Hospitals, 7 Dispensaries with staff of 38, provided for 2,217 in-patients and 82,052 out-patients for the past year.

*Secretary:* Rev. H. J. Scudder, M.A., & B.D., Punganur, S. India.

## CONGREGATIONAL SOCIETIES.

**THE AMERICAN BOARD OF COMMISSIONERS FOR FOREIGN MISSIONS.**—Has two large Missions, the American Marathi Mission, and the Madura Mission. The Marathi Mission includes a large part of the Bombay Presidency, with centres at Bombay, Ahmednagar, Satara and Sholapur, was commenced in 1813, the first American Mission in India. Its activities are large and varied. The staff at the beginning of 1915 consisted of 48 missionaries and 462 Indian workers operating in 164 outstations exclusive of Bombay City. Organised Church a number 65 with 7,841 communicants, and 6,138 adherents. There is a Leper work at Sholapur. The Educational work embraces 21 Boarding schools with 2,400 pupils, 155 ordinary schools with 5,371 boys and girls under instruction, three-fifths of whom are non-Christians. A large Theological Seminary at Ahmednagar trains for the Indian Ministry. Zenana work and Industrial work are vigorously carried on, the latter embracing carpentry, metal hammering, lace work, carpet weaving and extensive work on an improved hand loom. A school for the blind is conducted on both Educational and Industrial lines. 43,081 patients were treated in the Hospitals and Dispensaries of the Mission last year. The Mission has for 70 years published the "Dnyanodaya," the only combined English and Marathi Christian weekly newspaper. Special evangelistic work is carried on amongst the tribes known as the Bhills and Mangs. This Mission was the first to translate the Christian scriptures into the Marathi tongue.

**THE MADURA MISSION.**—In the S. Madras District, commenced in 1834, has a staff of 47 missionaries and 843 Indian workers, operates in the Madura and Ramnad districts and has a communicant roll of 8,621 with 25,601 adherents and 35 organised churches, many of which are entirely self-supporting and self-governing. Schools number 265 with 13,008 pupils. There is a Christian College at Madura, as also Hospitals for men and women; at Pasmalai are a Theological Institution, Industrial School, Teachers' Training School and Printing Press. The Secretary of the Marathi Mission is the Rev. A. H. Clark, Ahmednagar; and of the Madura Mission, the Rev. C. S. Vanghan, Manamadurai.

The Arcot Mission commenced under the American Board was transferred to the Reformed Church of America in 1851.

**THE SCANDINAVIAN ALLIANCE MISSION OF NORTH AMERICA.**—Embraces two Branches,

one in Bengal and the other in Khandesh. The total mission staff is represented by 12 missionaries and 27 Indian workers. There are 50 communicants and a Christian community of 125. Nine Elementary Schools provide for 150 pupils.

*Secretaries:* Rev. O. A. Dahlgren, Navapur, Khandesh, and Miss H. Abrahamson, Domar, Bengal. The Branch in Khandesh co-operates with the Swedish Alliance Mission, and both missions having a united yearly conference.

**THE SWEDISH ALLIANCE MISSION.**—Working among the Bhils in West Khandesh has 15 missionaries and 28 Indian workers. There are 5 congregations with a total membership of 470, of whom 220 are communicants. There are 5 Elementary Schools, 2 Boarding Schools and one Industrial School. The pupils are 90.

*Secretary:* Rev. Enok Hedberg, Nandurbar, West Khandesh.

**THE SCANDINAVIAN ALLIANCE MISSION, HIMALAYAS.**—(Finnish Branch). The total mission staff is represented by nine missionaries and six native workers. There are about 80 Communicants, five churches and a Christian community of about 100. One Orphanage with 23 orphans, one Kindergarten school, one Upper Primary school and three Day Schools with about 70 pupils. *Acting Secretary:* Miss Klara Hertz, Lachen, via Gangtok, Sikkim.

**THE LONDON MISSIONARY SOCIETY.**—Commenced work in India in 1798 and occupies 10 centres in N. India, 12 in S. India and 7 in Travancore. The Mission engages in every form of Missionary activity. The European staff numbers 223, Indian workers 2,004; Organised Churches, 490; Communicants 13,748 and Christian community 116,575. There are 4 Christian Colleges, students 159; 3 Theological Institutions, students 41; 4 Training Institutions, pupils 114; 22 High schools, pupils 4,849; 25 Boarding schools, scholars, 1,167; 9 Industrial schools, pupils 116 and 862 Elementary schools with 36,775 scholars. In Medical work Hospitals number 15, Dispensaries 15, qualified doctors 10, and 3,997 in-patients and 130,220 out-patients for the year.

The main centres of the Mission in N. India are at Calcutta, Benares and Almora. The Bhowanipour Institution at Calcutta is now a Teacher Training College. Evangelistic work is carried on amongst the thousands of pilgrims visiting Benares, and Almora is noted for its

**Hospital and Leper Asylum.** Special efforts are made amongst the Nama Sudras and the aboriginal tribes known as the Majhwars, Cheros and Pankas. The S. India district is divided into the Kanarese, Telugu and Tamil areas, with 12 stations and 472 outstations. At Nagercoil, (Travancore) is the Scott Memorial College with 985 students, a Church and congregation

said to be the largest in India, and a large Printing Press, the centre of the S. Travancore Tract Society.

*N. India Secretary:* Rev. J. H. Brown, B.A., B.D., Calcutta.

*S. India Secretary:* Rev. E. P. Rice, B.A., Bangalore.

## ALL-INDIA MISSIONS.

**THE CHRISTIAN AND MISSIONARY ALLIANCE**—Dates from the year 1893 under the name of the India Missionary Alliance, but a number of its missionaries were at work in Berar Province much earlier. The work is confined to the provinces of Berar, Khandesh and Gujerat. There is a staff of 51 missionaries and 134 Indian workers. The number of Mission stations is 25, with additional outstations. There are 4 orphanages, 2 for boys and 2 for girls; 3 training schools for Indian workers, and 1 English congregation at Bhusawal. *Secretary:* Rev. L. F. Turnbull, Mehmedabad, Kaira District, Gujerat.

**THE CHURCH OF THE BRETHREN (AMERICAN)**—Opened work in 1895, and operates in the Southern part of Gujerat, Khandesh, and Thana Districts. Its staff numbers 29 including missionaries' wives, and 105 Indian workers. The baptised (immersed) membership stands at 1,125; education is carried on in 2 Girls' Boarding schools, 4 Boarding schools for boys, and 81 Village Day schools. Industrial work is connected with four of the schools, and a Farm Colony is established at Umballa.

**THE POONA AND INDIAN VILLAGE MISSION**—Founded in 1893 operates in the Poona, Satara and Sholapur Districts, with 23 European and 32 Indian workers. The number of Indian Christians is 40. The main work is evangelism of the villages, with Women's Zenana work, and Village schools. There are 4 Village Dispensaries, including a large medical work in the great pilgrimage city of Pandharpur, and a hospital at the head-quarters of the Mission, Nasrapur, in the Bhore State. *Secretary:* Mr. J. W. Stothard, Nasrapur, Poona District.

**THE AMERICAN CHURCHES OF GOD MISSION**—Has two missionaries at Bogra, Bengal.

**THE INDIAN CHRISTIAN MISSION**—Founded in 1895, has 31 Organised Churches, 11 Missionaries, 24 stations, 41 out-stations, 1,392 Communicants, and 28 Primary schools in the Ellore district, S. India, stations also in Berenag, Kumaoon, N. India, and Nuwara Eliya, Ceylon. *Secretary:* A. S. Paynter, Nuwara Eliya, Ceylon.

There are 3 **PENTECOSTAL MISSIONS** at work. The Pentecostal Mission in W. Khandesh and Thana Districts; the Pentecostal Church of the Nazarine Mission at Buldana, Berar, and the Pentecost Bands of the World Mission with a Boys' Orphanage at Dondl Lohara, C. P., a Girls' Orphanage at Raj Nandgaon, and a Leper Home at Raj Nandgaon. The staff consists of 14 missionaries and 28 native preachers and Bible women.

**THE SANARPUR AND LOHAGHAT DISTRICT BIBLE AND MEDICAL MISSION**—Was established at Lohaghat, 48 miles from Almora, in 1910. Amongst the faith missions are the Vanguard Mission at Sanjan, Thana District, with 6 Mis-

sionaries; and the Church of God Mission with 7 Missionaries at Lahore. The Burning Bush Mission has a staff of 8 Missionaries at Allahabad. The Tehri Border Village Mission is the only Christian enterprise in the Himalayan Native State of that name, its agents are stationed at Landour, and have translated portions of the New Testament into the Tehri-Garhwali language. *Secretary:* Miss A. N. Budden.

**THE HEPHIZIBAH FAITH MISSIONARY ASSOCIATION** has six missionaries. *Agent:* D. W. Zook, Adra, B. N. Ry.

**THE TIBETAN MISSION**—Has 5 Missionaries with headquarters at Darjeeling, and Tibet as its objective. *Secretary:* Miss J. Ferguson, Darjeeling.

**THE INDIAN MISSIONARY SOCIETY OF TINNEVELLY (DORNAKAL MISSION)**—Opened in 1904, operates in the Warangal District of the Nizam's Dominions. It is the missionary effort of the Tamil Christians of Tinnevely. There are now 1,550 Christians in 46 villages. *Secretary:* Mr. J. Anbudaiyan, B.A., L.T., Palamcottah.

**THE MISSION TO LEPROS**—Founded in 1874, is an interdenominational and international Society for the establishment and maintenance of Asylums for Lepers and Homes for their untainted children, working largely in India, China, and Japan. Its work in India is carried on through co-operation with 29 Missionary Societies. The Mission now has 30 Asylums of its own with over 4,223 inmates, and is aiding or has some connection with work for lepers at 21 other places in India. In the Mission's own and aided Asylums there are about 3,100 Christians. The total number of lepers reached by the Mission in India is about 5,000.

An important feature of the work of the Mission is the segregation of the untainted or healthy children of lepers from their diseased parents. 550 children are thus being segregated and saved from becoming lepers.

The Mission very largely relies on voluntary contributions for its support. *Patroness:* The Dowager Duchess of Dufferin and Ava. *President:* The Primate of Ireland. *Head Office:* 28, North Bridge, Edinburgh. Mr. Wellesley C. Bailey, General Superintendent. *Organising Secretary:* Mr. John Jackson, F.R.G.S., 33, Henrietta Street, Covent Garden, London. *Secretary for India:* Mr. W. H. P. Anderson, Poona (on leave; acting, Mr. T. Dobson, Scottish Mission Industries, Poona).

**THE REGIONS BEYOND MISSIONARY UNION**—An interdenominational Society commenced work at Motihari, Behar, in 1900, and now occupies 4 stations and 7 outstations in the Champaran and Saran Districts, with a staff of 13 Europeans, and 34 Indian workers. There are 21 Elementary schools, with 517 pupils, a Girls' and a Boys' Orphanage and Boarding school, communicants number 50.

**THE NATIONAL MISSIONARY SOCIETY OF INDIA**—Established 1905, it has a staff of 30 Indian Missionaries, operates in Morticity District (the Punjab), Nukkar Thasil (U. P.), Karwar (Kanara), Karjat-Karmala Talukas (Bombay), Omalur (Madras) and Bhagalpund Agency (C.I.). Christian community 2,000. Ten schools. Two Dispensaries. Organ: *The National Missionary Intelligence* (a monthly journal in English sold at 8 aa. per year post free).

*General Secretaries:* Mr. K. T. Paul, B.A., L.T., and Mr. P. O. Philip, B.A., N. M. S. Office, Royapettah, Madras.

**THE SEVENTH DAY ADVENTISTS**—Established 1895, have 44 Missionaries in various parts of India. Communicants, 221; Christian community, 1,034; Churches, 2; Elementary schools, 4; Hospitals, 2; Dispensaries, 2; patients, 1,150. *Secretary:* Rev. J. L. Shaw, Kirkville House, Mussoorie.

**THE AMERICAN MENNONITE MISSION.**—Established 1899, works in the C. Provinces. Mission staff numbers 20, Indian workers 80, Church members 530, 1 Industrial Training Institution, 1 High School, 1 Bible School, 2 Orphanages, 1 Widows' Home, 1 Leper Asylum, Elementary Schools 8; Dispensaries 3, Hospital 1. *Superintendent:* Rev. M. C. Lapp, P. O. Dhauntari, C. P.

**THE MENNONITE MISSION GENERAL CONFERENCE**—Started in 1901 in the C. Provinces. Workers number 11; Leper, Medical, Orphan and village work carried on. From the Leper Asylum 118 have been baptised. *Secretary:* Rev. P. W. Penner, Jangir, C.P.

**THE KUKKU AND CENTRAL INDIA HILL MISSION**—Established 1890 in the C. P. and Berar, has a mission staff of 22, Indian workers 17; Churches 7, Communicants 105; Christian community 550; 2 Boarding, 1 Industrial and 4 Elementary schools, with 114 pupils. *Secretary:* Mr. Carl Wydner, Ellichpur, Berar.

**THE CEYLON AND INDIA GENERAL MISSION**—Established 1893, occupies stations in India in the Coimbatore and Anantapur Districts. Mission staff, 23; Indian workers, 64; Churches 10, with Communicants 256, and Christian community 736; Orphanages 3; Elementary schools 27; pupils 641.

*Secretary:* Rev. D. Logan, Coonoor, Nilgiris.

**THE BOYS' CHRISTIAN HOME MISSION**—Owes its existence to a period of famine, was commenced in 1889. Mission staff 12, Indian workers 25. There are elementary schools with 78 children, two orphanages and a Widows' Home, where Industrial training is given. There are four Mission Stations—At Dhond, and at Bahraich, Orai and Benares in United Provinces. *Director:* Mr. Albert Norton, Dhond, Poona District.

### Ladies' Societies.

**ZENANA BIBLE AND MEDICAL MISSION.**—This is an interdenominational society, with headquarters in London, working among women and girls in seven stations in the Bombay Presidency, one in Madras, fourteen in United Provinces, and five in the Punjab. There are 89 European Missionary Ladies on the staff and 22 assistant missionaries, 215 Indian workers, teachers and nurses, and 77 Bible women. During 1913 there were 2,216 in-patients in the five hospitals supported by the Society (Nasik, Benares, Jaunpur, Lucknow

and Patna) and 25,932 out-patients. In their 56 schools were 3,369 pupils, while 174 women were under training as teachers. The evangelistic side of the work is largely done by house-to-house visitation and teaching the women in Zenanas: 3,242 women in 2,632 houses were so taught.

**THE LUDHIANA ZENANA AND MEDICAL MISSION** has removed its headquarters to Lahore leaving one Bible woman working in the city of Ludhiana. Four missionaries are in Lahore and work is being carried on in the Lahore District in connection with the American Presbyterian Mission.

**THE MISSIONARY SETTLEMENT FOR UNIVERSITY WOMEN** was founded in Bombay in 1895 to reach the higher class of Indian ladies, its activities now include a hostel for women students, in addition to educational, social, and evangelistic work. *Warden,* Miss Dobson, Girgaum, Bombay.

**THE MUKTI MISSION**, the well-known work of Pandita Ramabai, enables upwards of 350 widows, deserted wives and orphans to earn a comfortable living by means of industrial work organised by the Pandita, supported by a good staff of Indian helpers. A large staff of European Missionary Ladies do evangelistic work in the surrounding Kedgeon, Poona District.

### Disciple Societies.

The India Mission of the Disciples of Christ (Foreign Christian Missionary Society of Cincinnati, Ohio, and Christian Women's Board of Missions of India combined) commenced work in 1882, its area Central and United Provinces; number of Indian Churches 14, and immersed communicants 1,468. Its staff, including Missionaries' wives, 67; Asst. missionaries 3, and Indian Worker's staff 301. There are 7 Hospitals, 17 Dispensaries, with 53,255 in-patients and out-patients for the past year. Three Orphanages and an Industrial Home show 440 inmates. Two leper asylums with 132 inmates. In connection with the Industrial work a farm of 400 acres has been taken at Damoli. There are 8 Middle schools, 41 Primary schools with 3,126 scholars; 2 Boarding schools, with 247 students. An active zenana work is carried on, and there is a home for women and children.

The Australian branch has three Mission stations in Poona District. The Great Britain and Ireland branch has two mission stations, one in Mirzapur District, U. P., and one in Palaman District, Orissa. These have no organic connection with the India Mission of the Disciples of Christ.

*Secretary:* Rev. D. O. Cunningham, M.A., Bilaspur, C. P.

### Udenominational Missions.

**THE CENTRAL ASIAN MISSION**, with a Church, Dispensary and School is found on the N.-W. Frontier, conducted on the lines of the China Inland Mission, and has Kafristan as its objective.

**The Friends' Foreign Missionary Association** with Headquarters at Hoshangabad, Central Provinces, commenced in 1874. Work has recently been opened up in the Gwalior and Bhopal States. There are 5 Churches, 27 Missionaries, 195 members, Orphanages for

Boys and Girls, 1 Anglo-Vernacular school, 15 Day schools, one High School and one Zenana Hospital with a general dispensary connected with the Mission, in addition to a self-supporting weaving community at Itarsi, and Industrial Works and a Farm Colony at Hosangabad. *Secretary*. Mr. Henry I. Robson, Sohagpur, C. P.

The American Friends' Mission with 5 Missionaries is working at Nowgong. *Secretary*. Miss D. Fistler, Nowgong, C. I.

The Old Church Hebrew Mission was established in 1858, in Calcutta, and is said to be the only Hebrew Christian Agency in India. *Secretary*. J. W. Pringle, Esq., Calcutta.

THE OPEN BRETHREN—Occupy 46 stations in the U. Provinces, Bengal, S. Maratta, Godavari Delta, Kanarese, Tinnevely, Malabar Coast, Coimbatore and Nilgiri Districts. They hold an annual Conference at Bangalore.

### Lutheran Societies.

(Several of the German Missions mentioned below have suspended or curtailed their work).

The American Evangelical Lutheran Mission. General Council, founded in 1844 for the Godavari and Kistna Districts, has its Headquarters at Rajamundry. Its staff consists of 27, including Missionaries' wives and Lady Doctors, with 484 Indian Workers. The membership is 23,620. There are Boys' and Girls' Central Schools, Mission Press, a well-equipped hospital and Book Depot at Rajamundry, and a High School at Peddapur. *Chairman*, The Rev. C. F. Kuder, M.A., Rajahmundry.

The 'General Synod' Section of the above, has its headquarters in Guntur, founded in 1842. Its Christian community numbers 46,594, with 16,242 communicants, 27 missionaries inclusive of wives, and 815 Indian workers, showing an increase of 61 per cent. during the past ten years. The following institutions are connected with the Mission, a second grade College, High school for Girls, Hospital for women and children, Normal training School, and Industrial School. *Secretary*, the Rev. Victor McCauley, Guntur.

THE EVANGELICAL NATIONAL MISSIONARY SOCIETY OF SWEDEN, founded in 1856, occupies the districts of Betul, Chhindwara and Saugor in the Central Provinces. There are 1,600 Church members and 11 Indian churches. The staff numbers 53 including women, with an Indian staff 150. Schools number 41 with 1,355 children. Only two of the schools are Secondary, all the rest are Primary Schools. There are small dispensaries at most of the stations. *Secretary*: Rev. A. G. Danielsson, D.D., Chhindwara, C. P.

The Hermannsburg Evangelical Lutheran Mission began its work in India in 1886 and operates in the South Nellore, the East Chittoor, and South East Caddapa Districts. There are 22 Indian Churches; 13 European Missionaries and 178 Indian workers, Church members number 3,170. Women's work is done in 3 stations, with a large Industrial school for 70 girls, in a fourth, in addition to Zenana and Educational work. There are 91 Lower grade Elementary schools, 1 High school, 1 Lower Secondary, and 2 Higher grade schools, and a Theological Seminary and Training school. A Leper Asylum is stationed at Kodur with a Dispensary, and a large Industrial school at

Nayudupeta. Since the beginning of 1914 a part of the field of the Hermannsburg Mission has been ceded to the Ev. Luth. Joint Synod of Ohio and other States in U. S. America, who had expressed the wish to enter the field. Kodur and Puttur with the leper asylum at Kodur was ceded to them with 2 European missionaries, 26 Indian workers and 424 church members. The Hermannsburg Missions secretary is as yet acting for the Ohio Mission also. *Secretary*: Rev. J. Rohwer, Gudur, Nellore Dist., Madras.

The Schleswig Holstein Evangelical Lutheran Mission, commenced in 1881, operates in the Vizagapatam District. There are 12 stations, a total Missionary Staff of 44, with 441 Indian workers. The growth in the Christian population has been from 1,530 in 1901 to 16,550 in 1914. Communicants number 4,140, and Catechumen 7,862. Education work comprises 1 Theological Seminary, 1 Secondary, 1 Industrial, and 100 Elementary schools, providing for 2,716 pupils. There are 9 Dispensaries with 50,000 patients for the year. English Services are held in the Mission Church at Jeypore. *Secretary*: Rev. J. Th. Timmecke, Koraput, Vizagapatam.

CHURCH OF SWEDEN EVANGELICAL LUTHERAN MISSION—Northern Circle (formerly Leipzig Evangelical Lutheran Mission). Commenced 1834, taken over by the Church of Sweden Mission Board, 1915. Confined to the Tamil-speaking areas, chiefly in the Madras Presidency, with an Indian ministry and Church in Rangoon and Penang. European staff numbers 10. Ordained Indian ministers, 32 and 74 Indian workers. Organised Churches, 33. Places of worship, 221. Baptised membership, 18,497. There are 172 boys' schools, and 17 girls' schools. Teaching staff 346 and pupils 8,354. The Schools are managed by a British committee. *Secretary*. The Rev. D. Bexell, Kilpauk, Madras.

THE BASEL MISSION was commenced in 1834, and occupies 26 main stations and 128 out-stations in the Coorg, S. Mahratta, Nilgiris, and N. and S. Canara districts of S. W. India. The total European Staff numbers 41 with 1,110 Indian workers. There are 66 organised Churches, with a membership of 19,762. Educational work embraces 204 schools (including 2 Theological, 9 Boarding and 4 High schools) with 16,970 Elementary and 3,150 Secondary school pupils and 831 scholars in Boarding Institutions and Orphanages. There are good Hospitals at Belgiri and Calicut under European doctors with 3 branch hospitals and 4 Dispensaries connected; 66,804 patients were treated last year. There is a Leper Asylum at Chevayur.

The Industrial work of the Mission is second to none in India and comprises 17 establishments, embracing one mechanical establishment of a first rate order at Mangalore, 2 Mercantile branches, 7 Weaving and 7 Tile work establishments in the Kanara and Malabar districts; employs number 3,633. A large Printing Press at Mangalore issues publication in the Kanarese, Malayalam, Tulu and English languages. Owing to the internment of a number of missionaries belonging to the Basel Mission, it has been impossible to revise the above figures most of which are for 1914. *Secretary*: Rev. B. Luthi, Bangalore.

**THE CHURCH OF SWEDEN MISSION**—Was founded in 1874. Operated till 1915 in the Madras, Tanjore, Trichinopoly and Ramnad Districts. Since 1915 the Mission having taken full charge of the former Leipzig W. Lutheran Mission field, works also in the Chingleput and S. Arcot Districts. The staff numbers 24, baptised membership 21,474. Schools 273 with 13,250 pupils. *Secretary*: Rev. D. Bexell, Kilpauk, Madras.

**THE MISSOURI EVANGELICAL LUTHERAN MISSION**—Is located in Arcot and Travancore with a staff of 15 Missionaries. One Training school, 58 pupils, and 41 Elementary schools with 1,717 pupils are connected with the Mission. *Secretary*: Rev. G. Huchener, Nagercoil, Travancore.

**THE DANISH EVANGELICAL LUTHERAN MISSION**—Established 1863 in South Arcot, working there and in North Arcot, on the Shevaroy Hills and in Madras, has a total staff of 44 Missionaries and 211 Indian workers. Communicants 904, Christian community 2,210, 1 High School, 2 Boarding Schools, 4 Industrial Schools, Elementary Schools 58, total scholars 21,849, Dispensary patients 24,643.

*Chairman*, Rev. J. Bittmann, 38, Broadway, Madras (on furlough); *Ag. Chairman*, Rev. Knud Helberg, 14, Rundalls Road, Madras, N.C.

**THE GERMAN EVANGELICAL LUTHERAN (GOSSNER'S MISSION)**—Founded 1836, occupies stations in Bengal, Bihar and Assam; the Mission staff numbers 92, Indian workers 1,017; Communicants 34,208, and Christian community over 100,000; organised Churches, 437. Theological and Teacher's Seminaries: 66 pupils. Boarding Schools: 39. Elementary schools: 277. Pupils in schools: 9,355. Leper asylum: 728 inmates. Lace schools in Ranchi and Purulia. *Secretary*: Rev. Paul Wagner, Purulia, B. N. Rly., Manbhum Bihar. Headquarters, Friedenau, Berlin, Germany.

**THE SANTAL MISSION OF THE NORTHERN CHURCHES** (formerly known as the India Home Mission to the Santals)—Founded in 1867, works in the Santal Parganas, Goalpara (Assam), Malda and Dinajpur. Work is principally among the Santals. The mission staff numbers 24; Indian workers 342; communicants 3,000; Christian community 18,000; organised churches 36; boarding schools 2; pupils 316; elementary schools 31; pupils 535; industrial school, 1. *Secretary*: Rev. P. O. Bodding, Dumka, Santal Parganas.

### Methodist Societies.

The Methodist Episcopal Church began its Indian Mission in 1857, and with the exception of Assam, and the N. W. Frontier Provinces is now established in all the political Divisions of India. Its number of baptised Christians stands at 266,275, under the supervision of 240 ordained and 900 unordained Ministers. Schools of all grades number 1,569 with 39,087 students, Sunday School scholars stand at 126,000, and young peoples' societies at 604, generally known as Epworth Leagues. Thirty Anglo-Indian Congregations are found in the larger Cities, with one College, 6 High schools, and numerous Middle schools for this class. For Anglo-Vernacular Education the mission has 3 Colleges, 12 High schools and 62 schools of

Lower grade. The net increase from the non-Christian races has been at the rate of 15,000 per annum, for the last decade. The Isabella Thoburn Training College at Lucknow is a large institution. There are large printing presses at Calcutta, Madras and Lucknow.

In Burma there are 9 schools, with 1,484 pupils, a large Boarding and Day school for European girls at Rangoon, a hill station Boarding school for girls at Thandaung, and an Anglo-Indian Church at Rangoon.

While financially supported by the Board of Foreign Missions of the American Methodist Episcopal Church, ecclesiastically the Church in India is independent of foreign control, being under the supervision of its own bishops, viz., *Bishop*, F. W. Warne, Lucknow. *Bishop* J. E. Robinson, Bangalore, and *Bishop*, J. W. Robinson, Bombay.

The American Wesleyan Church with 5 Missionaries, has in recent years taken over an independent Mission at Pardi and Daman, Gujerat District. *Secretary*: Rev. A. E. Ashton, Pardi.

The Reformed Episcopal Church of American (Methodist) at Lalitpur and Lucknow U. P. has 2 Missionaries, 4 Outstations, 2 Orphanages, and a membership of nearly 100.

**THE WESLEYAN METHODIST MISSIONARY SOCIETY** commenced work in India in 1817 (Ceylon in 1814). The Mission in India is organised into 10 District Synods with 3 Provincial Synods. There is a large English work connected with the Society, 20 ministers giving their whole time to Military work and English churches.

The districts occupied include 64 main stations in Bengal, Madras, Mysore, Bombay, Punjab, Central Provinces, Hyderabad (Nizam's Dominions), Trichinopoly and Burma. The European staff numbers 145 with 2,497 Indian workers; Communicants 18,987, and total Christian community 45,372. Organised Churches 93.

Educational work comprises 4 Christian Colleges, students, 560; 10 Theological Institutions, pupils, 80; 11 Training Institutions, pupils, 96; 20 High Schools, pupils, 5,139; 71 Boarding schools, scholars, 2,478; 10 Industrial schools, pupils, 602; 1,177 Elementary schools, with 57,363 scholars. In Medical work there are 12 hospitals, 22 dispensaries, 18 qualified doctors, 2,984 in-patients and 75,703 out-patients for the year.

The above particulars are those published for 1914.

*Vice-Chairman of General Synod*:—Rev. J. Cooling, B.A., Madras.

The Women's Foreign Missionary Society of the M. E. Mission is divided into 7 Conferences and is co-extensive with the main work of the Mission. Upwards of 200 Lady Missionaries are engaged in Educational, Zenana, and Evangelistic and Medical work. The Secretary for the Bombay Conference is Miss A. A. Abbott, 47, Mazagon Road, Bombay.

**THE FREE METHODIST MISSION** of N. America—Established at Yeotmal, 1893, operates in Berar with a staff of 16 Missionaries and 16 Indian workers. Organised church 1, Communicants 70; 1 Industrial and 6 Elementary schools, with 175 pupils. *Secretary*: Miss Elizebeth Moreland, Yeotmal, Berar.

## ROYAL ARMY TEMPERANCE ASSOCIATION.

In 1862 there was started among the British troops in Agra a small Society, under the leadership of Rev. G. Gregson, Baptist minister, which after a short time took the name of the Soldiers' Total Abstinence Society.

For some ten years the Society struggled with varying success, spreading to other Garrison Stations, but at the end of that time, though it had obtained recognition from the Horse Guards, and was the first Society whose Pledge was so recognised, the membership was not more than 1,200. In the year 1873, however, through the influence of the then Commander-in-Chief, the work was placed on a firmer footing, the Rev. Gelson Gregson gave up his whole time to it, and by accompanying the troops through the Afghan War, making an extended tour through Egypt, and bringing the work into close touch with troops, both during peace and war, in the year 1886, when he left the Society, it numbered about 11,000 members. He was followed by a Madras Chaplain, who after two years gave place to the Rev. J. H. Bateson. In 1886, the late Lord Roberts, Commander-in-Chief, organised his Scheme for Regimental Institutes, which have had a wonderful effect on the life of British soldiers in the East; and the Total Abstinence Society was so far incorporated into the scheme as to be allowed ample accommodation, and many practical benefits, in every Unit. At the same time the name was changed to that of the Army Temperance Association, and the work of various societies thus linked together, under one organisation. The effect has been more than even the inaugurator himself ever hoped for. The membership rose steadily from that date and still increases.

**Growth of the Society.**—In 1889 there were 12,140 members; in 1899, 20,688; in 1909, 30,220, while in 1913-14, the total was 35,000, or over 45 per cent. of the total garrison in India. In 1908, the Secretary having retired after 20 years' work, the Rev. H. C. Martin, M.A., a Chaplain in Bengal, was selected by H. E. Lord Kitchener, to the post of Secretary. Twenty years ago, the Association, which has now for some years been the Royal Army Temperance Association, with the Patronage of King Edward VII, and later of the King Emperor, George V., organised a similar Society in Great Britain, with headquarters in London, from which the troops in South Africa, the Mediterranean, etc., are controlled, so that the whole British Army receives the attention of the Association.

**Varied Activities.**—What primarily has been the effort of the Association, namely, the decrease of Intemperance, and promotion of sobriety among soldiers has gradually grown into work of every kind, in the interests of soldiers; promotion of sport, occupation of spare time, assistance towards employment in Civil Life, advice and information on the subject of Emigration, provision of Furlough Homes, all tend to enlist the support of officers and men in the Association, and add to its value to them, and to the efficiency of

its work, generally. The wonderful change that in late years has taken place in the character of the British Army, in India especially, is due to various causes, including the increased interest in games and sports, the spread of education, the different class of men enlisted, and so on, but the R. A. T. A. has always been given its due share among other causes, by all authorities and Blue Books, and particularly by Officers Commanding Divisions, Brigades and Units. These changes in conduct are seen most plainly in the increased good health of the Army in India.

**Effect in the Army.**—In the year 1889, 1,174 British soldiers died in India, and 1,800 were invalided unfit for further duty; in 1910, only 330 died, and 484 were invalided. In 1889, 688 underwent treatment for Delirium tremens, in 1910, only 37. In conduct the same difference is to be found; as late as 1901 as many as 545 Courts Martial were held on men for offences due to excessive drinking; in 1906 only 217. In 1904, 2,231 good conduct medals were issued; in 1910, there were 4,581. In regard to the character of the men themselves, who become members of the Association, during their service, we find that in 1912, 59 per cent. on transfer from the Colours obtained Exemplary characters, and 93 per cent. either Exemplary or Very Good; the remainder were for the most part men who, after some years of heavy drinking, had towards the end of their service been persuaded to try and reform themselves, but not soon enough to avoid the consequences of previous excess.

**Organisation.**—The War has necessarily brought increased work upon this society, the results of which were very quickly apparent. Capacious reception sheds fitted up in the Docks at Bombay and Karachi, proved of the greatest value to troops moving from India, and to the large number coming in; special arrangements aided by a loan from the Government of India, enabled the R. A. T. A. to organise branches in every Territorial unit immediately on arrival, special attention being paid to small detachments and to the Hill stations. In consequence there were, within a month of the completion of the Garrison, over 70 Territorial Branches, containing nearly 50 per cent. of the new arrivals, and this has increased consistently ever since. In addition to covering all troops from Aden to Singapore, the R. A. T. A. is the only Society working among the Troops of I.E.F. "D", the force in the Persian Gulf. Institutes have been opened and the cordial good will of the authorities enables the R. A. T. A. to provide many amenities to the very trying experiences of this Force. The men relieved, and sent back to India for periodic rest, in addition, receive a warm welcome and entertainment at the hands of the Association. The following is the organisation of the Council and management:—

**Patron:** His Majesty the King Emperor.

**President:** His Excellency the Commander-in-Chief.



**Council:**

The General Officers, Heads of Departments,  
Army Headquarters.

The General Officers Commanding Divisions.

Two Officers Commanding Regiments.

Officers of the R. A. M. C. and I. M. S.

Two Regimental Quartermasters.

Representatives of the various Churches.

**Executive Committee.**

The Secretary, Army Department.

The Adjutant-General.

The Quarter-Master General.

The Director-General, Military Works.

The Military Secretary to the C.-in-C.

General Secretary: Rev. H. C. Martin, M.A.

Treasurer: Mr. F. L. Shearman.

Auditor: Mr. H. C. O'Brien.

Bankers: Alliance Bank of Simla.

Head Office: Middlelands, Simla.

Official Organ: "On Guard," published monthly.  
(Rs. 3 per annum.)

**THE ANGLO-INDIAN TEMPERANCE ASSOCIATION**—Founded in 1888 by the late Mr. W. S. Caine, M.P., is a Home Association which has been the means of establishing a net work of Temperance Societies throughout the Indian Empire, and has provided a common platform upon which Christians, Hindus, Mahomedans and Parsis unite for the moral elevation of the Indian peoples. There are 280 Indian Societies affiliated with the Association. The President is Sir J. Herbert Roberts, Bart., M.P. and Secretaries, Sir Balchandra Krishna, Kt., L.M. (Bombay), and Mr. John Turner Rae (London). The interests of the Association are especially represented in Parliament by the President, and the Rt. Hon. T. R. Ferees, M.P., Mr. J. Herbert Lewis, M.P., and the Rt. Hon. Sir Thos. Whitaker, M.P., all of whom are members of the Association's Council. The Association publishes a quarterly journal *Abkari*, edited by Mr. Frederick Grubb. Officers—Arkbrook, Home Park Road, Wimbledon.

**THE ALL-INDIA TEMPERANCE CONFERENCE.**—Growing out of the Association mentioned above and in closest relation with it is the All-India Temperance Conference, formed in 1903, which meets every year, as a matter of convenience, at the same time and place as the Indian National Congress, but having no official connection with it. The President is elected annually. The President for 1914 was

the Rev. Herbert Anderson. The membership of the Conference is the 280 Indian Temperance Societies affiliated with the Anglo-India Temperance Association as above, from each of which delegates are sent to the Annual Meeting of the Conference. Special Councils embracing Presidency Societies are established at Bombay, Allahabad, Calcutta and Madras, each of which has its own local President, Secretary and Committee. The Bombay Temperance Council was inaugurated in 1897. It consists of delegates elected by about 23 different temperance, religious and philanthropic societies at work in Bombay, Poona, Ahmedabad and Surat, including several of the Christian churches, the International Order of Good Templars, the International Order of Rechabites and the Women's Christian Temperance Union. The medium of communication between the Societies composing the Conference is the *Abkari*, published quarterly from England by the A. I. T. A. Amongst the general aims of the Conference may be mentioned:—

The separation of the licensing from the revenue;

The doing away with the present system of license auctioneering;

The reduction of the present number of liquor shops and the prevention of the formation of new ones in important positions especially in the crowded areas;

The later opening and the earlier closing of liquor shops, and the entire closing of them on public holidays;

The introduction of Temperance Teaching in the Government Elementary Schools and Colleges, which despite the desire of Government expressed in their Circular letter No. 730-37 of 12th Sept. 1907 to "deal with the subject of intemperance in a few sensible lessons in the sanctioned Readers," has not yet been adequately treated and as in the corresponding schools in England.

The general spread of Total Abstinence principles depends more largely upon the individual Societies constituting the Conference than upon the official body. Amongst the methods are lantern addresses, dramatic representations and singing by itinerant preachers. Twelve paid Lecturers travel through various districts holding public meetings and addressing the masses wherever possible. Educational work is especially to the front in the Punjab district through the Amritsar Society.

**CREMATION.**

Cremation as a means of disposing of the dead is commonly adopted throughout India by the Hindus, but has been little adopted among the Europeans in India. A crematorium was started some years ago in Calcutta close to the Lower Circular Road Cemetery, at a cost of Rs. 40,000. But the return for this expenditure is disappointing. Only five or six cremations take place in Calcutta each year, in spite of the fact that the fee for cremation has been fixed by the Cremation Society of Bengal at the very low figure of Rs. 30,

subject to reductions in the case of poor families. The reason for this is thought to be that, when possible, Europeans go home to die, and the Native Christians and Eurasians are very largely Roman Catholics among whom a prejudice exists against this form of the disposal of the dead. In Bombay arrangements have recently been made for a small area in the Sewri Cemetery to be walled in, and for cremations to be carried on within it in the primitive style of the country, but in such a way as to preserve the ashes.

# Warrant of Precedence.

(Brought up to 1 July 1916.)

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, Empress of India,—

To all to whom these presents shall come :

WHEREAS it hath been represented unto Us that it is advisable that the rank and precedence of persons holding appointments in the East Indies as regulated by Our Royal Warrant, dated the 18th day of October. 1876, should be altered, We do therefore hereby declare that it is Our will and pleasure that in lieu of the table laid down in Our said recited Warrant, the following table be henceforth observed with respect to the rank and precedence of the persons hereinafter named, *viz.* :—

1. Governor-General and Viceroy of India.
2. Governors of Madras, and Bombay.
3. President of the Council of the Governor-General.
4. Lieutenant-Governor when in his own territories.
5. Commander-in-Chief in India.
6. Lieutenant-Governor.
7. Chief Justice of Bengal.
8. Bishop of Calcutta, Metropolitan of India.
9. Ordinary Members of the Council of the Governor-General.
10. Commander-in-Chief of Her Majesty's Naval Forces in the East Indies.
11. Chief Justice of a High Court other than that of Bengal.
12. Bishops of Madras and Bombay.
13. Ordinary Members of Council in Madras and Bombay.
14. Lieut. Generals Commanding the Forces, Punjab, Bengal, Madras and Bombay.
15. Chief Commissioners of the Central Provinces and Assam, Residents at Hyderabad and in Mysore, and Agents to the Governor-General in Rajputana, Central India, and Baluchistan.
16. Puisne Judges of a High Court.
17. Chief Judge of a Chief Court.
18. Military Officers above the rank of Major-General.
19. Comptroller and Auditor-General.
20. Additional Members of the Council of the Governor-General for making Laws and Regulations.
21. Bishops of Lahore, Rangoon, and Lucknow.
22. Secretaries to the Government of India.
23. Commissioner in Sind.
24. Judges of a Chief Court, Recorder of Rangoon and Judicial Commissioners, Burma.
25. Chief Secretaries to the Governments of Madras and Bombay.
26. Major-Generals, Members of a Board of Revenue, Commissioners of Revenue and Customs, Bombay; Financial Commissioners, Punjab and Burma.

27. Judicial Commissioners, including Additional Judicial Commissioners of Oudh, the Central Provinces, and Sind.

28. Additional Members of the Councils of the Governors of Madras, and Bombay for making Laws and Regulations, Members of the Legislative Council of a Lieutenant-Governor.

29. Vice-Chancellors of Indian Universities.

## FIRST CLASS.

30. Members of the Indian Civil Service of 30 years' standing.

31. Advocate-General, Calcutta.

32. Commissioners of Divisions, the Superintendent of Port Blair, and Residents, Political Agents, and Superintendents drawing Rs 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts), within their respective charges.

33. Chief Secretaries to Local Governments other than those of Madras and Bombay.

34. Surveyor-General of India, Directors-General of the Post Office, of Telegraphs in India and of Railways, Chief Engineers, first class, Accountants-General, Military and Public Works Departments, Director, Royal Indian Marine, and Manager, North-Western Railway.

35. Bishops (not territorial) under license from the Crown.

36. Archdeacons of Calcutta, Madras and Bombay.

37. Brigadiers-General.

38. Commissioners of Divisions.

39. Commissioner of Northern India, Salt Revenue, and Opium Agents, Benares and Bihar.

40. Secretaries and Joint Secretaries to Local Governments, and Private Secretary to the Viceroy.

## SECOND CLASS.

41. Members of the Indian Civil Service of 23 years' standing and Colonels.

42. Military Secretary to the Viceroy.

43. Judicial Commissioners of the Hyderabad Assigned Districts and Baluchistan; the Superintendent of Port Blair; Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts).

44. Inspector-General of Forests in India, and Director of the Geological Survey.

45. Standing Counsel to the Government of India.

46. Directors of Public Instruction, and Inspectors-General of Police and Prisons under Local Governments, and Accountants-General.

47. Survey Commissioner and Director of Land Records and Agriculture, Bombay; Commissioners of Settlements; and Controllers of Military Accounts.

48. Chief or Senior Civil Secretary to a Local Administration.

## Warrant of Precedence in India.

49. Chief Engineers, second and third classes; Deputy Surveyor-General; Deputy Director-General of Telegraphs in India, and Director-in-Chief, Indo-European Telegraph Department.

50. Divisional, and District and Sessions Judges, Collectors and Magistrates of Districts; Deputy Commissioners of Districts; Deputy Superintendent of Port Blair; and the Chief Officer of each Presidency Municipality; within their respective charges.

51. Archdeacons of Lahore, Lucknow, and Rangoon.

52. Deputy Secretaries to the Government of India, and

53. The Senior Chaplains of the Church of Scotland in Bengal, Madras, and Bombay.

54. Remembrancers of Legal Affairs and Government Advocates under Local Governments.

55. Officers in the First Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

56. Members of the Indian Civil Service of 18 years' standing and Lieutenant-Colonels.

57. The Deputy Director, Royal Indian Marine.

58. The Assistant Director, Royal Indian Marine.

59. Commanders and Inspectors of Machinery, Royal Indian Marine.

### THIRD CLASS.

60. Political Agents and Superintendents drawing less than Rs. 2,000 a month (not being Collectors or Deputy Commissioners of British Districts) within their own charges.

61. Secretaries to Local Administrations other than those already specified.

62. Consulting Engineers to the Government for India and Railways.

63. Private Secretaries to Governors.

64. Military Secretaries to Governors.

65. Administrators-General.

66. Sanitary Commissioners under Local Governments; Postmasters-General; the Comptroller, Post Office; and Conservators of Forests, first grade.

67. Directors of Public Instruction, Inspectors-General of Police and Prisons under Local Administrations, and Comptrollers and Deputy Auditors-General.

68. Managers of State Railways other than the North-Western Railway; Chairman of the Port Trust, Bombay, and Chairman of the Port Trust, Calcutta.

69. Vice-Chairman of the Port Trust, Calcutta; Directors of Traffic and Construction, Indian Telegraph Department; Examiners of Accounts, Public Works Department, first class; Officers of the Superior Revenue Establishment of State Railways, first class, first grade; Superintending Engineers, Public Works Department, first class; Superintendents of the Survey of India Department, first grade.

70. Inspectors-General of Registration and Directors of Land Records and Agriculture, under Local Governments.

71. Senior Chaplains other than those already specified.

72. Sheriffs within their own charges.

73. Officers in the Second Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

### FOURTH CLASS.

74. Members of the Indian Civil Service of 12 years' standing, and Majors.

75. Lieutenants of over 8 years' standing, and Chief Engineers of the Royal Indian Marine.

76. Government Solicitors.

77. Inspectors-General of Registration, Sanitary Commissioners, and Directors of Land Records and Agriculture under Local Administrations.

78. Officers in the Third Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

The entries in the above table apply exclusively to the persons entered therein, and, while regulating their relative precedence with each other, do not apply to the non-official community resident in India, the members of which shall take their place according to usage.

Officers in the above table will take precedence in order of the numbers of the entries. Those included in one number will take precedence *inter se* according to the date of entry into that number.

When an officer holds more than one position in the table, he will be entitled to the highest position accorded to him.

Officers who are temporarily officiating in any number in the table will rank in that number below permanent incumbents.

All officers not mentioned in the above table; whose rank is regulated by comparison with rank in the army, to have the same rank with reference to civil servants as is enjoyed by Military Officers of equal grades.

All other persons who may not be mentioned in this table, to take rank according to general usage, which is to be explained and determined by the Governor-General in Council in case any question shall arise.

Nothing in the foregoing Rules to disturb the existing practice relating to precedence at Native Courts, or on occasions of intercourse with Natives, and the Governor-General in Council to be empowered to make rules for such occasions in case any dispute shall arise.

All ladies to take place according to the rank herein assigned to their respective husbands, with the exception of wives of Peers, and of ladies having precedence in England independently of their husbands, and who are not in rank below the daughters of Barons, such ladies to take place according to their several ranks, with reference to such precedence in England, immediately after the wives of Members of the Council of the Governor-General.

Given at Our Court at Windsor this tenth day of December, in the year of Our Lord One thousand eight hundred and ninety-eight, and in the sixty-second year of Our Reign.

By Her Majesty's Command.

(Signed) GEORGE HAMILTON.

## *Warrant of Precedence in India.*

### **Supplementary Graded List of Civil Offices not Reserved for Members of the Indian Civil Service prepared under the orders of the Governor-General in Council.**

#### **\*FIRST CLASS—(No. 55 of the Warrant).**

Assay Master of the Mint, Calcutta and Bombay.

Chief Judges of Presidency Courts of Small Causes.

Commissioners of Police, Calcutta, Madras, Bombay, and Rangoon.

Controller of Printing and Stationery.

Deputy Comptroller-General.

Director-General of Archaeology.

Director of the Botanical Survey of India.

Director, Zoological Survey of India.

Inspector-General of Agriculture in India.

Masters of the Mint, Calcutta and Bombay.

Meteorological Reporter to the Government of India.

Superintendent of Revenue Survey, Madras.

Superintendent, Trigonometrical Surveys.

#### **\*SECOND CLASS—(No. 73 of the Warrant).**

Actuary to the Government of India.

Adviser on Chinese Affairs in Burma.

Agent General in India for the British Protectorates in Africa under the Administration of the Foreign Office.

Chief Collector of Customs, Burma.

Chief Constructor of the Royal Indian Marine Dockyard at Bombay.

Chief Inspector of Mines in India.

Chief Presidency Magistrates.

Chief Superintendents of the Telegraph Department.

Collector of Customs and Salt Revenue, Sind.

Collectors and Magistrates of Districts; and Deputy Commissioners of Districts and of Settlements.

Conservators of Forests, 2nd and 3rd Grades.

Consulting Surveyor to the Government of Bombay.

Deputy Accountants-General under Local Governments.

Deputy Directors of Telegraphs.

Deputy Inspectors-General of Police.

Deputy Superintendent of Port Blair.

Directors of the Persian Gulf Section, and of the Persian Section of the Indo-European Telegraph Department.

Directors of Telegraphs, 2nd, 3rd and 4th Classes.

Director of Statistics.

Divisional and District and Sessions Judges.

Emigration Agent at Madras.

Examiners of Accounts, Public Works Department, 2nd and 3rd Classes.

Government Astronomer, Madras.

Government Emigration Agents at Calcutta for British Guiana and Natal, and for Trinidad, Fiji, Jamaica, and Mauritius.

Imperial Bacteriologist.

Inspector of Mines to the Government of India.

Librarian, Imperial Library.

Principal of the Mayo College at Ajmer.

Principal of the Rajkumar College at Rajkot.

Officers in charge of the Records of the Government of India.

Officers of the Indian Educational Service, and of the graded Educational Service drawing Rs. 1,250 a month and upwards.

Officers of the Superior Revenue Establishment of State Railways, 1st Class, 2nd and 3rd Grades.

Reporter on Economic Products.

Superintendent of the Royal Botanical Gardens, Calcutta.

Superintendents, Geological Survey of India.

Superintendents of Revenue Survey and Assessment, Bombay.

Superintendents of the Survey of India Department, 2nd Grade.

Superintending Engineers, Public Works Department, 2nd and 3rd Classes.

Under Secretaries to the Government of India.

#### **\*THIRD CLASS—(No. 78 of the Warrant).**

Agricultural Chemist.

Assistant Directors of Dairy Farms.

Assistant Inspector-General of Forests.

Assistant Secretaries to the Government of India.

Chief Chemical Examiner, Central Chemical Laboratory, Nainital.

Collector of Stamp Revenue, Superintendent of Excise Revenue, and Deputy Collector of Land Revenue, Calcutta.

Commander of the steamer employed in the Persian Gulf Section of the Indo-European Telegraph Department.

Constructors of the Royal Indian Marine Dockyards at Bombay and Kidderpore.

Deputy Administrator-General, Bengal.

Deputy Collector of Salt Revenue, Bombay.

Deputy Commissioner of Northern India, Salt Revenue.

Deputy Commissioners of Police, Calcutta and Bombay.

Deputy Commissioners of Salt, Abkari and Customs Department, Madras.

Deputy Conservators of Forests drawing Rs. 800 a month and upwards.

Deputy Directors of Land Records and Agriculture, Madras and Burma.

\* The entries in each class are arranged in alphabetical order.

Deputy Director of the Imperial Forest School, Dehra Dun.

Deputy Directors of Revenue Settlements and Deputy Superintendents of Revenue Surveys, Madras.

Deputy Postmasters-General of the 1st, 2nd and 3rd grades.

Deputy Superintendents, Geological Survey of India.

Deputy Superintendents, Survey of India Department.

District Superintendents of Police drawing Rs. 800 a month and upwards.

Engineer and Electrician of the Persian Gulf Section of the Indo-European Telegraph Department.

Examiners of Accounts, Public Works Department, 4th class, 1st and 2nd grades.

Executive Engineers, Public Works Department, 1st and 2nd Grades.

Inspector-General of Railway Mail Service.

Judge of the City Civil Court, Madras.

Judges of Presidency Courts of Small Causes, and First Judge of the Small Cause Court, Rangoon.

Manager of the Cordite Factory, Aruvankadu. Officers of the Indian Educational Service and of the graded Educational Service, drawing less than Rs. 1,250 a month, but more than Rs. 1,000 a month.

Officers of the Superior Revenue Establishments of the State Railways, Second Class, 1st and 2nd Grades.

Paleontologist, Geological Survey of India.

Presidency Magistrates.

Protector of Emigrants and Superintendent of Emigration, Calcutta.

Public Prosecutor in Sind.

Registrars to the High Courts and to the Chief Court, Punjab.

Sub-Deputy Opium Agents drawing Rs. 800 a month and upwards.

Superintendent of the Indian Museum.

Superintendent of Land Records and Agriculture in Sind.

Superintendents of Stamps and Stationery.

Superintendents, Telegraph Department, 1st and 2nd Grades.

Under the orders of Her Majesty's Secretary of State for India, the following table showing the relative rank of officers in the Army, Royal Navy, and Royal Indian Marine is attached to the Warrant of Precedence for India, published with Home Department Notification No. 328, dated the 10th February 1899:—

<i>Lieut.-Colonels</i>	<p>Captains under 3 years and officers of corresponding rank, Royal Navy. Deputy Director, Royal Indian Marine. Assistant Director, Royal Indian Marine. Commanders Royal Navy. Commanders, Royal Indian Marine. Staff Commanders and officers of corresponding rank, Royal Navy. Inspectors of Machinery, Royal Indian Marine. Chief Engineers, Royal Indian Marine.</p>	<i>But Junior to all Lieut Colonels.</i>
<i>Majors</i>	<p>Lieutenants of 8 years' seniority and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, over 8 years' seniority. Engineers' Royal Indian Marine, of and over 9 years' seniority.</p>	<i>But Junior to all Majors</i>
<i>Captains</i>	<p>Lieutenants under 8 years and officers of corresponding rank, Royal Navy. Lieutenants, Royal Indian Marine, under 8 years' seniority. Engineers, Royal Indian Marine, under 9 years' seniority.</p>	<i>But Junior to all Army Captains.</i>
<i>Lieutenants</i>	<p>Sub-Lieutenants and officers of corresponding rank, Royal Navy. Sub-Lieutenants, Royal Indian Marine. Assistant Engineers, Royal Indian Marine.</p>	<i>But Junior to all Lieutenants.</i>

## SALUTES.

The following is the official table of salutes in Indian Territories—a term which includes all the waters of India within three miles of the coast. "Indian seas," within which some of the salutes are to be given, extend from the North-West entrance of the Straits of Malacca to Cape Comorin, excepting Ceylon, and from Cape Comorin to Aden, including the Maldivé and Laccadive Islands, and the Persian Gulf.

Persons.	No. of Guns.
Imperial Salute .. .. .	101
The King and Emperor when present in person .. .. .	101
Members of the Royal Family .. .. .	31
Royal Standard and Royal Salute .. .. .	31
Viceroy and Governor-General in India. .. .. .	31
Independent Asiatic Sovereigns .. .. .	21
Other Foreign Sovereigns .. .. .	21
Members of their Families and their Standards .. .. .	21
Ambassadors .. .. .	19
Governors of Presidencies .. .. .	17
The President of the Council of India .. .. .	17
Governor-General of Portuguese Settlements in India .. .. .	17
Governor of Pondicherry .. .. .	17
Governors of His Majesty's Colonies .. .. .	17
Lieutenant-Governors of Provinces in India .. .. .	15
Commander-in-Chief in India (If a Field Marshal) .. .. .	19
Commander-in-Chief in India (If a General) .. .. .	17
Commander-in-Chief of His Majesty's Naval Forces .. .. .	15
Generals and Admirals, or their Flags .. .. .	15
Members of the Viceroy's Council .. .. .	15
Plenipotentiaries and Envoys .. .. .	15
Lieut.-Governors of His Majesty's Colonies .. .. .	15
Vice-Admirals, Lieut.-Generals, or their Flags .. .. .	13
Agents to the Viceroy and Governor-General .. .. .	13
Agent to the Governor of Bombay in Kathiawar .. .. .	13
Residents .. .. .	13
Chief Commissioners of Provinces, and Commissioner of Sind .. .. .	13
Members of the Executive Council of a Local Government .. .. .	13
Rear-Admirals & Major-Generals, or their Flags .. .. .	11
Political Agents and Charges d'Affaires .. .. .	11
Commodores of the first-class, and Brigadier-Generals .. .. .	9
The Portuguese Governor of Damaun .. .. .	9
The Governor of Diu .. .. .	9
Return salutes to Foreign Men-of-war .. .. .	..
Return salutes to Captains of the Navy, and Naval Officers of inferior rank .. .. .	1

## Salutes to Chiefs.

## Salutes of 21 guns.

Baroda. The Maharaja (Gaekwar) of.  
Hyderabad. The Nizam of.

Mysore. The Maharaja of.

## Salutes of 19 guns.

Bhopal. The Begam (or Nawab) of.

Gwalior. The Maharaja (Sindbia) of.  
Indore. The Maharaja (Holkar) of.  
Jammu and Kashmir. The Maharaja,  
Kalat. The Khan (Wali) of.  
Kolhapur. The Maharaja of.  
Mewar (Udaipur). The Maharana of.  
Travancore. The Maharaja of.

## Salutes of 17 guns.

Bahawalpur. The Nawab of.  
Bharatpur. The Maharaja of.  
Bikaner. The Maharaja of.  
Bundi. The Maharao Raja of.  
Cochin. The Raja of.  
Cutch. The Rao of.  
Jaipur. The Maharaja of.  
Karauli. The Maharaja of.  
Kota. The Maharao of.  
Marwar (Jodhpur). The Maharaja of.  
Patiala. The Maharaja of.  
Rewa. The Maharaja of.  
Sirohi. The Maharaja Adhiraja of.  
Tonk. The Nawab of.

## Salutes of 15 guns.

Alwar. The Maharaja of.  
Banswara. The Maharawal of.  
Bhutan. The Maharaja of.  
Datia. The Maharaja of.  
Dewas (Senior Branch). The Raja of.  
Dewas (Junior Branch). The Raja of.  
Dhar. The Raja of.  
Dholpur. The Maharaj Rana of.  
Dungarpur. The Maharawal of.  
Idar. The Maharaja of.  
Jaisalmer. The Maharawal of.  
Khairpur. The Mir of.  
Kishangarh. The Maharaja of.  
Orchha. The Maharaja of.  
Partabgarh. The Maharawat of.  
Sikkim. The Maharaja of.  
Sirohi. The Maharao of.

## Salutes of 13 guns.

Benares. The Raja of.  
Cooch Behar. The Maharaja of.  
Jaora. The Nawab of.  
Rampur. The Nawab of.  
Tippera. The Raja of.

## Salutes of 11 guns.

Aga Khan, His Highness the.  
Ajmergarh. The Maharaja of.  
Baoni. The Nawab of.  
Bhavnagar. The Thakur Sahib of.  
Bijwar. The Maharaja of.  
Cambay. The Nawab of.  
Chamba. The Raja of.  
Charkhari. The Maharaja of.  
Chhatarpur. The Raja of.  
Dhrangadhra. The Raj Sahib of.  
Faridkot. The Raja of.  
Gondal. The Thakur Sahib of.  
Janjira. The Nawab of.  
Jhabua. The Raja of.  
Jhalawar. The Raj-Rana of.  
Jind. The Maharaja of.  
Junagadh (or Junagarh). The Nawab of.  
Kahlur (Bilaspur). The Raja of.  
Kapurthala. The Maharaja of.  
Mandi. The Raja of.  
Manipur. The Raja of.  
Morvi. The Thakur Sahib of.

**Nabha.** The Maharaja of.  
**Narnanggarh.** The Raja of.  
**Navanagar** (or **Nawanagar**). The Jam of.  
**Palampur.** The Diwan of.  
**Panna.** The Maharaja of.  
**Porbandar.** The Rana of.  
**Pudukkottai** (or **Puddukottai**). The Raja of.  
**Rachanpur.** The Nawab of.  
**Rajgarh.** The Raja of.  
**Rajpipla.** The Raja of.  
**Ratlam.** The Raja of.  
**Sailana.** The Raja of.  
**Samthar.** The Raja of.  
**Sirmur** (Nahan). The Raja of.  
**Sitaman.** The Raja of.  
**Suket.** The Raja of.  
**Tehri** (Garhwal). The Raja of.

*Salutes of 9 guns.*

**All Rajpur.** The Raja of.  
**Belasinor** (or **Vadasinor**). The Nawab (Babi) of.  
**Bansda.** The Raja of.  
**Baraundha.** The Raja of.  
**Bariya.** The Raja of.  
**Barwani.** The Rana of.  
**Chhota Udepur** (or **Mahun**). The Raja of.  
**Dharampur.** The Raja of.  
**Dhrol.** The Thakur Sahib of.  
**Fadthli** (Shukra). The Sultan of.  
**Hispaw** (or **Thihaw**). The Sawbwa of.  
**Karond** (Kalahandi). The Raja of.  
**Kengtung** (or **Kyangton**). The Sawbwa of.  
**Khlochipur.** The Rao of.  
**Kishn** and **Socotra.** The Sultan of.  
**Lahej** (or **Al Hauta**). The Sultan of.  
**Limri.** The Thakur Sahib of.  
**Lunawara** (or **Lunavada**). The Raja of.  
**Malhar.** The Raja of.  
**Maler Kotla.** The Nawab of.  
**Möng Nal.** The Sawbwa of.  
**Nagod.** The Raja of.  
**Palitana.** The Thakur Sahib of.  
**Rajkot.** The Thakur Sahib of.  
**Sachin.** The Nawab of.  
**Savantvadi.** The Sar Desai of.  
**Shehr** and **Mokalla.** The Sultan of.  
**Sunth.** The Raja of.  
**Vankaner** (or **Wankaner**). The Raj Sahib of.  
**Wadhwani** (or **Vadwan**). The Thakur Sahib of.  
**Yawghwe** (or **Nyaungywe**). The Sawbwa of.

**Personal Salutes.**

*Salutes of 21 guns.*

**Gwallor.** Honorary Major-General His Highness Maharaja Sir Madho Rao Sindhia Bahadur, G.C.S.I., G.C.V.O., A.D.C., LL.D., Maharaja of.  
**Jaipur.** Honorary Major-General His Highness Maharajadhiraja Sir Sawal Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.  
**Kolhapur.** His Highness Sir Shahu Chhatrapati Maharaj, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.  
**Mewar** (Udaipur). His Highness Maharajadhiraja Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., Maharana of.  
**Travancore.** His Highness Sri Maharaja Raja Sir Bala Rama Varma Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

*Salutes of 19 guns.*

**Cochin.** His Highness Raja Sree Sir Ram Varmah, G.C.S.I., G.C.I.E., Raja of.

**Mysore.** Her Highness Maharani Kempa Nanjammani Avaru Vanivilas, C.I., of.  
**Nepal.** Honorary Major-General His Excellency Maharaja Sir Chandra Shumshere Jung, Bahadur Rana, G.C.B., G.C.S.I., G.C.V.O. D.C.L., Prime Minister, Marshal of.

*Salutes of 17 guns.*

**Jodhpur.** Honorary Major-General His Highness Maharaja Bahadur Sir Pratap Singh, G.C.S.I., G.C.V.O., K.C.B., A.D.C., Regent of.  
**Orchha.** His Highness Maharaja Mahindra Sawai Sir Partap Singh Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

*Salute of 13 guns.*

**Palampur.** His Highness Nawab Sir Sher Muhammad Khan Zorawar Khan, G.C.I.E., Diwan of.

*Salutes of 11 guns.*

**Barwani.** His Highness Rana Ranjit Singh of.  
**Bhor.** His Highness Shankar Rav Chimnaji, Pant Sachiv of.  
**Lahej** (or **Al Hauta**). His Highness Abdul Karim-bin-Fadthli-bin Ali.  
**Maler Kotla.** His Highness Ahmud Ali Khan Bahadur, Nawab of.

**Shehr** and **Mokalla.** His Highness Sultan Ghalib-bin-Awadth Al-Kaytl, Sultan of.

*Salutes of 9 guns.*

**Danta,** Shri Hamirsinhji Jaswatsinhji, Maharana of.  
**Kanker.** Maharajadhiraja Komal Deo, of.  
**Las Bela.** Mr Kamal Khan, Jam of.  
**Loharu.** Nawab Sir Amir-ud-din Ahmad Khan Bahadur, K.C.I.E., of.  
**Mudhol.** Meherban Malojirao Vyankatray Raju Ghorpade, alias Nana Sahib, of.  
**Dthala** Amir Nasr Shaif, of.

**Local Salutes.**

*Salutes of 21 guns.*

**Bhopal.** The Begam (or Nawab) of.  
**Gwallor.** The Maharaja (Sindhia) of.  
**Indore.** The Maharaja (Holkar) of.  
**Jammu** and **Kashmir.** The Maharaja of.

*Salutes of 5 guns.*

The Sheikh of Koweit.  
 The Sheikh of Bahrein.  
 The Sheikh of Abu Thabi.

*Salutes of 3 guns.*

The Sheikh of Debal.  
 The Sheikh of Shargah.  
 The Sheikh of Ajman.  
 The Sheikh of Um-el-Kawain.  
 The Sheikh of Ras-al-Khelma.

**Local Personal Salutes.**

These are fired on the termination of an official visit.

*Salute of 13 guns.*

His Excellency the Govr. of Bushire.

*Salutes of 12 guns.*

The Sheikh of Mohammerah.

The Sheikh of Koweit.

*Salute of 11 guns.*

The Sheikh of Bahrein.

*Salutes of 5 guns.*

Eldest son of the Sheikh of Mohammerah.

Eldest son of the Sheikh of Koweit.

*Salutes of 5 guns.*

The Govr. of Mohammerah.  
 The Govr. of Bunder Abbas.  
 The Govr. of Lingah.

*Salute of 3 guns.*

Eldest son of the Sheikh of Bahrein.

## SALARIES OF CHIEF OFFICERS.

The following are the tables of salaries sanctioned for the Chief Officers of the Administration of India. The tables are liable to variation, and it should be noted that the pay of members of the Indian Civil Service is subject to a deduction of 4 per cent. for subscription towards annuity.

	Pay per Annum Rs.
Viceroy and Governor-General .. .. .	2,50,800
Private Secretary to Viceroy .. .. .	24,000
Military Secretary and Aide-de-Camp to Viceroy .. .. .	18,000
Surgeon to Viceroy .. .. .	14,400
Commander-in-Chief of the Forces in India .. .. .	1,00,000
Military Secretary to Commander-in-Chief in India .. .. .	18,000
Members (6) of the Governor-General's Council .. .. .	80,000
President, Railway Board .. .. .	60,000 or 72,000
Member, Railway Board .. .. .	48,000
Secretaries to the Government of India in the Army and Public Works and Legislative Departments .. .. .	42,000
Secretaries to the Government of India in the Finance, Foreign, Home, Revenue and Agriculture, Commerce and Industry and Education Departments .. .. .	48,000
Educational Commissioner .. .. .	30,000 to 36,000
Comptroller and Auditor-General .. .. .	54,000
Controller of Currency .. .. .	36,000 to 42,000
2 Accountants-General, Class I .. .. .	33,000
3 " " " Class II .. .. .	30,000
4 " " " Class III .. .. .	27,000
1 Commissioner of "Northern" India Salt Revenue .. .. .	30,000
1 Director-General of Posts and Telegraphs .. .. .	42,000 to 48,000
2 Postmasters-General .. .. .	80,000
2 Postmasters-General .. .. .	27,000
3 " " " .. .. .	24,000
4 " " " .. .. .	21,000
1 Director, Geological Survey of India .. .. .	24,000
Deputy Secretaries to the Government of India in the Finance and Foreign Departments .. .. .	27,000
Deputy Secretaries to the Government of India in the Legislative and Home Departments .. .. .	24,000
Superintendent of Port Blair .. .. .	30,000 to 36,000
1 Chief Commissioner of Delhi .. .. .	36,000
1 Director, Criminal Intelligence .. .. .	36,000
1 Deputy Director, Criminal Intelligence .. .. .	18,000 to 24,000
Inspector-General of Forests .. .. .	31,800
Surveyor-General, Survey of India .. .. .	36,000
1 Chief Inspector of Mines in India .. .. .	21,000 to 24,200
1 Director-General, Indian Medical Service .. .. .	36,000
1 Sanitary Commissioner with the Government of India .. .. .	24,000 to 30,000
1 Director-General of Archaeology in India .. .. .	20,400
1 Administrator-General of Bengal .. .. .	24,000
1 Director-General of Commercial Intelligence .. .. .	24,000
1 " " Indian Observatories .. .. .	18,000 to 24,000
Controller of Stationery and Printing .. .. .	18,000 to 27,000
Governors of Madras, Bombay, and Bengal .. .. .	1,20,000
Private Secretaries to Governors of Madras, Bombay, and Bengal .. .. .	18,000
Surgeons to Governors of Madras, Bombay, and Bengal .. .. .	12,000
Military Secretary and Aide-de-Camp to Governors of Madras, Bombay, and Bengal .. .. .	12,000
Bishop of Calcutta .. .. .	45,977
Bishop of Madras .. .. .	25,600
Bishop of Bombay .. .. .	25,600
Chief Justice of Bengal .. .. .	72,000
Chief Justices of Madras, Bombay, and the North-Western Provinces .. .. .	60,000
Puisne Judges of the High Courts of Calcutta (15), Madras (6), Bombay (6), and the North-Western Provinces (6) .. .. .	48,000
Chief Judge of the Chief Court, Punjab .. .. .	48,000
" " " Burma .. .. .	48,000
Judges of the Chief Court, Punjab (4), and Burma (4), except Chief Judges .. .. .	42,000
6 Political Residents, 1st class .. .. .	48,000
9 " " " 2nd class .. .. .	33,000
Political Officers on time scale .. .. .	5,400 to 28,800



## Provincial Salaries.

N.B.—Acting and other allowances are not included in the salaries shown.

Pay per  
Annum.  
Rs.

## Bengal.

3	Members of Council	..	..	..	..	..	..	64,000
1	Member of the Board of Revenue	..	..	..	..	..	..	45,000
5	Commissioners of Divisions	..	..	..	..	..	..	35,000
1	Chief Secretary to Government	..	..	..	..	..	..	45,000
3	Secretaries to Government	..	..	..	..	..	..	33,000
8	Under Secretaries to Government	..	..	..	..	..	..	12,000
1	Excise Commissioner	..	..	..	..	..	..	21,600
1	Chairman of Corporation of Calcutta	..	..	..	..	..	..	30,000
1	Deputy ditto	..	..	..	..	..	12,000 to	18,000
1	Collector of Customs, Calcutta	..	..	..	..	..	..	30,000
12	Magistrates and Collectors, 1st grade	..	..	..	..	..	..	27,000
13	" " 2nd "	..	..	..	..	..	..	21,600
14	" " 3rd "	..	..	..	..	..	..	18,000
17	Joint Magistrates and Deputy Collectors, 1st grade	..	..	..	..	..	..	10,800
17	" " 2nd "	..	..	..	..	..	..	8,400
-	Assistant Magistrates and Collectors	..	..	..	..	..	4,800 to	6,000
3	District and Sessions Judges, 1st grade	..	..	..	..	..	..	36,000
13	" " 2nd "	..	..	..	..	..	..	30,000
21	" " 3rd "	..	..	..	..	..	..	24,000
1	Chief Judge, Presidency Courts of Small Causes	..	..	..	..	..	24,000 to	30,000
4	Judges	"	"	"	"	..	{ 12,000, 13,500,	15,600 and 16,800
1	Advocate General	..	..	..	..	..	..	48,000
1	Solicitor to Government	..	..	..	..	..	..	60,000
1	Registrar, High Court	..	..	..	..	..	..	20,400
1	Inspector-General of Police	..	..	..	..	..	30,000 to	36,000
1	Director of Public Instruction	..	..	..	..	..	24,000 to	30,000
1	Private Secretary to H. E. The Governor	..	..	..	..	..	..	18,000
1	Director of Agriculture	..	..	..	..	..	..	27,000
1	Director of Land Record	..	..	..	..	..	..	18,000
1	Secretary of the Board of Revenue	..	..	..	..	..	..	18,000

## Bihar and Orissa.

1	Lieutenant Governor	..	..	..	..	..	..	1,00,000
3	Members of the Executive Council	..	..	..	..	..	..	60,000
1	Member of the Board of Revenue	..	..	..	..	..	..	42,000
1	Chief Secretary to Government	..	..	..	..	..	..	36,000
2	Secretaries to Government	..	..	..	..	..	..	27,000
3	Under Secretaries to Government	..	..	..	..	..	..	12,000
5	Commissioners	..	..	..	..	..	..	35,000
10	Magistrates and Collectors, 1st grade	..	..	..	..	..	..	27,000
11	" " 2nd "	..	..	..	..	..	..	21,600
12	" " 3rd "	..	..	..	..	..	..	18,000
11	Joint Magistrates and Deputy Collectors, 1st grade	..	..	..	..	..	..	10,800
10	" " 2nd "	..	..	..	..	..	..	8,400
-	Assistant Magistrates and Collectors	..	..	..	..	..	4,800 to	6,000
2	District and Sessions Judges, 1st grade	..	..	..	..	..	..	36,000
5	" " 2nd "	..	..	..	..	..	..	30,000
6	" " 3rd "	..	..	..	..	..	..	24,000
1	Commissioner of Excise and Salt	..	..	..	..	..	..	17,280
1	Director of Land Records and Surveys	..	..	..	..	..	..	21,600
1	Director of Agriculture	..	..	..	..	..	..	18,000
1	Inspector-General of Police	..	..	..	..	..	30,000 to	36,000
1	Director of Public Instruction	..	..	..	..	..	..	24,000

[illegible]

**United Provinces of Agra and Oudh.**

[illegible]

**Punjab.**

<b>1</b>	<b>Lieutenant Governor</b>	.. .. .	1,00,000
<b>1</b>	<b>Chief Secretary to Government</b>	.. .. .	36,000
<b>2</b>	<b>Secretaries to Government</b>	.. .. .	18,000 and 21,600
<b>2</b>	<b>Under Secretaries to Government</b>	.. .. .	12,000
<b>1</b>	<b>Under Secretary, Police Department, and Inspector-General of Police</b>	.. .. .	80,000
<b>1</b>	<b>Under Secretary, Educational Department</b>	.. .. .	24,000
<b>2</b>	<b>Financial Commissioners</b>	.. .. .	42,000
<b>2</b>	<b>Secretaries to Financial Commissioner</b>	.. .. .	10,800 and 8,400
<b>5</b>	<b>Commissioners</b>	.. .. .	88,000

# Punjab—contd.

14	Deputy Commissioners, 1st grade	..	..	..	..	..	..	27,000
14	" " 2nd "	..	..	..	..	..	..	21,600
14	" " 3rd "	..	..	..	..	..	..	18,000
14	Assistant Commissioners, 1st grade	..	..	..	..	..	..	10,800
14	" " 2nd "	..	..	..	..	..	..	8,400
39	" " 3rd "	..	..	..	..	..	..	6,000
2	Divisional Judges, 1st grade	..	..	..	..	..	..	33,000
4	" " 2nd "	..	..	..	..	..	..	30,000
6	" " 3rd "	..	..	..	..	..	..	27,000
10	" " 4th "	..	..	..	..	..	..	21,600
10	District Judges	..	..	..	..	..	..	18,000
1	Sub-Judge and Judge, Small Cause Court, Simla	..	..	..	..	..	..	15,000
1	Registrar of the Chief Court	..	..	..	..	..	..	15,000
1	Legal Remembrancer	..	..	..	..	..	..	24,000
1	Inspector-General of Police	..	..	..	..	..	..	24,000
1	Director of Public Instruction	..	..	..	..	..	..	24,000

# Burma.

1	Lieutenant Governor	..	..	..	..	..	..	1,00,000
1	Chief Secretary to Government	..	..	..	..	..	..	36,000
2	Secretaries	..	..	..	..	..	..	21,600
2	Under Secretaries	..	..	..	..	..	..	6,000
1	Assistant Secretary	..	..	..	..	..	..	6,000
1	Financial Commissioner	..	..	..	..	..	..	42,000
1	Settlement Commissioner and Director of Land Records	..	..	..	..	..	..	33,000
1	Deputy Director of Land Records	..	..	..	..	..	..	19,200
1	Secretary to Financial Commissioner	..	..	..	..	..	..	12,000
1	Director of Agriculture	..	..	..	..	..	..	21,600
8	Commissioners of Divisions	..	..	..	..	..	..	33,000
12	Deputy Commissioners, 1st grade	..	..	..	..	..	..	27,000
14	" " 2nd "	..	..	..	..	..	..	21,600
15	" " 3rd "	..	..	..	..	..	..	18,000
12	Assistant " 1st "	..	..	..	..	..	..	12,000
13	" " 2nd "	..	..	..	..	..	..	8,400
10	" " 3rd "	..	..	..	..	..	..	7,200
52	" " 4th "	..	..	..	..	..	5,400 to	6,000
1	Judicial Commissioner	..	..	..	..	..	..	42,000
2	Divisional Judges, 1st grade	..	..	..	..	..	..	33,000
1	" " 2nd "	..	..	..	..	..	..	30,000
2	" " 3rd "	..	..	..	..	..	..	27,000
2	" " 4th "	..	..	..	..	..	..	21,600
8	District	..	..	..	..	..	..	18,000
1	Registrar, Chief Court, Lower Burma	..	..	..	..	..	..	8,400
1	Government Advocate	..	..	..	..	..	18,000 to	21,600

# Central Provinces.

1	Chief Commissioner	..	..	..	..	..	..	62,000
1	Financial Commissioner	..	..	..	..	..	..	42,000
5	Commissioners of Divisions	..	..	..	..	..	..	33,000
13	Deputy Commissioners, 1st class	..	..	..	..	..	..	27,000
13	" " 2nd "	..	..	..	..	..	..	21,600
14	" " 3rd "	..	..	..	..	..	..	18,000
10	Assistant " 1st "	..	..	..	..	..	..	10,800
10	" " 2nd "	..	..	..	..	..	..	8,400
-	" " 3rd "	..	..	..	..	..	4,800 to	6,000
1	Judicial Commissioner	..	..	..	..	..	..	42,000
2	Additional Judicial Commissioners	..	..	..	..	..	..	36,000
4	Divisional and Sessions Judges	..	..	..	..	..	14,800 to	18,240
2	District and Sessions Judges	..	..	..	..	..	14,800 and	20,400
1	Inspector-General of Police	..	..	..	..	..	27,000 to	33,000
1	Director of Public Instruction	..	..	..	..	..	18,000 to	24,000



# Indian Orders

## The Star of India.

The Order of the Star of India was instituted by Queen Victoria in 1861, and enlarged in 1866, 1876, 1897, 1902, and 1911, and the dignity of Knight Grand Commander may be conferred on Princes or Chiefs of India, or upon British subjects for important and loyal service rendered to the Indian Empire; the second and third classes for services in the Indian Empire of not less than thirty years in the department of the Secretary of State for India. It consists of the Sovereign, a Grand Master (the Viceroy of India), the first class of forty-four Knights Grand Commanders (22 British and 22 Indian), the second class of one hundred Knights Commanders, and the third class of two hundred Companions, exclusive of Extra and Honorary Members, as well as certain additional Knights and Companions.

The Insignia are (i) the Collar of gold, composed of the lotus of India, of palm branches tied together in satire, of the united red and white rose, and in the centre an Imperial Crown; all enamelled in their proper colours and linked together by gold chains. (ii) The Star of a Knight Grand Commander is composed of rays of gold issuing from a centre, having thereon a star of five points in diamonds resting upon a light blue enamelled circular riband, tied at the ends and inscribed with the motto of the Order, *Heaven's Light our Guide*, also in diamonds. That of a Knight Commander is somewhat different, and is described below. (iii) The Badge, an onyx cameo having Her Majesty Queen Victoria's Royal Effigy thereon, set in a perforated and ornamental oval, containing the motto of the Order surmounted by a star of five points, all in diamonds. (iv) The Mantle of light blue satin lined with white, and fastened with a cordon of white silk with blue and silver tassels. On the left side a representation of the Star of the Order.

The ribbon of the Order (four inches wide for Knights Grand Commanders) is sky-blue, having a narrow white stripe towards either edge, and is worn from the right shoulder to the left side. A Knight Commander wears (a) around his neck a ribbon two inches in width, of the same colours and pattern as a Knight Grand Commander, and pendent therefrom a badge of a smaller size, (b) on his left breast a Star composed of rays of silver issuing from a gold centre, having thereon a silver star of five points resting upon a light blue enamelled circular ribbon, tied at the ends, inscribed with the motto of the Order in diamonds. A Companion wears from his left breast a badge of the same form as appointed for a Knight Commander, but of a smaller size pendent to a like ribbon of the breadth of one and a half inches. All Insignia are returnable at death to the Central Chancery, or if the recipient was resident in India, to the Secretary of the Order at Calcutta.

**Sovereign of the Order:—H. I. M. The King.**

**Grand Master of the Order:—His Excellency the Viceroy and Governor-General of India, the Right Honourable Baron Chelmsford.**

## Honorary Knights Grand Commanders (G. C. S. I.)

The Zil-es-Sultan of Persia  
Prince Louis d'Arenberg

## Extra Knights Grand Commanders (G. C. S. I.)

H. M. the Queen Empress  
H. R. H. The Duke of Connaught

## Knights Grand Commanders (G. C. S. I.)

H. H. the Gaekwar of Baroda  
H. H. the Maharana of Udaipur  
H. H. the Maharajah of Jaipur  
H. H. the Maharaja of Travancore  
The Marquis of Lansdowne  
Baron Reay  
H. H. the Maharaja of Jammu and Kashmir  
The Earl of Elgin  
H. H. the Maharaja of Kohlapur  
H. H. the Maharaja of Gwalior  
Lord Harris  
H. H. the Maharaja of Rewa  
H. H. the Maharaja of Jodhpur  
Baron Macdonnell  
Earl Curzon of Kedleston  
Baron Sandhurst  
Lord George Hamilton  
H. H. the Raja of Cochin  
Baron Amphil  
Maharaja Sir Chandra Shamshere Jung of Nepal  
H. H. the Maharaja of Orcha  
H. H. the Maharaja of Mysore  
Baron Harding of Penshurst  
H. H. the Begum of Bhopal  
Sir Steuart Bayley  
Sir Dennis FitzPatrick  
Sir Dighton Probyn  
Baron Sydenham  
Sir Arthur Lawley  
Sir John Hewitt  
H. H. the Maharaja of Bikaner  
H. H. Maha Rao of Kotah  
General Sir O'Moore Creagh  
General Sir B. Auchamp Duff  
General Sir Edmund George Barrow  
H. H. the Raja of Kapurthala  
H. H. the Nizam of Hyderabad  
H. H. the Aga Khan  
H. H. the Nawab of Tonk.

## Knights Commanders (K. C. S. I.)

The Earl of Cromer  
Sir Joseph West Ridgeway  
Sir William Chichele Plowden  
Sir James Broadwood Lyall  
Sir David Miller Barbour  
Sir Philip Perceval Huthins  
Sir Henry Edward Stokes  
Sir Henry Mortimer Durand  
Maj.-Gen. Sir Oliver Richardson Newmarch  
Sir Frederick William Richards Fryer  
H. H. Maharao of Siroh  
Sir Courtenay Peregrine Uberty  
Sir William Erskine Ward

Brig. Surg.-Lieut.-Col. Sir Alfred Swaine  
 Lethbridge  
 H. H. Maharao of Bundi  
 Sir William Mackworth Young  
 Sir Charles James Lyall  
 Sir Robert Joseph Crosthwaite  
 Sir William John Cunningham  
 Sir Richard Udny  
 Colonel Sir Howard Melliss  
 Sir Arthur Charles Trevor  
 Sir John Frederick Price  
 Sir Charles Montgomery Rivaz  
 Sir James Digges La Touche  
 Lieut.-Col. Sir David William Keith Barr  
 Sir Henry Martin Winterbotham  
 Sir James Monteath  
 Lieut.-Col. Sir Donald Robertson  
 Sir Andrew Henderson Leith Fraser  
 Sir Hugh Shakespear Barnes  
 Sir William Roe Hooper  
 Sir Arundel Tagg Arundel  
 Sir Thomas Raleigh  
 H. H. Maharaja of Bhavnagar  
 Sir Arthur Henry Temple Marti  
 Sir James Thomson  
 Sir Joseph Bampfylde Fuller  
 H. H. Raja of Chamba  
 Lieut.-Col. Arthur John, Baron Stamfordham  
 Sir Thomas William Holderness  
 Sir Lancelot Hare  
 Sir Charles Stuart Bayley  
 H. H. Raj Rana of Jhalawar  
 Raja Sir Tasadduk Rasul Khan of Jahangnabad,  
 Oudh  
 Sir John William Pitt Muir-Mackenzie  
 Sir James Wilson  
 H. H. Maharaja of Alwar  
 H. H. Raja of Jind  
 Sir Henry Erle Richards  
 Sir Gabriel Stokes  
 Sir George Stuart Forbes  
 H. H. Raja of Ratlam  
 James Lyle, Baron Inchcape  
 Sir Harvey Adamson  
 Nawab of Murshidabad  
 Lieut.-Col. Sir James Robert Dunlop-Smith  
 Sir John Ontario Miller  
 Sir Lionel Montague Jacob  
 Sir Murray Hammick  
 Sir Krishna Govinda Gupta  
 Sir Leslie Alexander Selim Porter  
 Sir Spencer Harcourt Butler  
 Sir Robert Warrand Carlyle  
 H. H. Maharaja of Kishangarh  
 Sir Reginald Henry Coadock  
 Sir James McCrone Douie  
 Sir James Scorgie Meston  
 Sir Benjamin Robertson  
 Sir Richard Amplett Lamb  
 Maharadjahiraja of Burdwan  
 Sir Elliot Graham Colvin  
 Sir Trevredyn Rashleigh Wynne  
 Surg.-Gen. Sir Charles Pardey Lukis  
 Sir George Casson Walker  
 H. H. Raja of Dhar  
 H. H. Raja of Dewas State (Senior Branch)  
 Surg.-Gen. Sir Francis Wollaston Trevor  
 H. H. Maharaja of Bhutan  
 Sir John Nathaniel Atkinson  
 Sir William Thomson Morison  
 Sir George Head Barclay  
 Lieut.-Gen. Sir James Willcocks  
 Lieut.-Col. Sir G. Roos-Keppel  
 Sir M. F. O'Dwyer

Sir Salyid Ali Imam  
 Sir D. C. Baillie  
 Sir Michael William Fenton  
 Sir Harold Arthur Stuart  
 Colonel Sir Sidney Gerald Burrard  
 Sir William Henry Solomon  
 Lt. ut.-Gen. Sir W. R. Birdwood.  
 Sir P. Sundaram Aiyar Sivaswami Aiyar  
 Sir Frederick William Duke  
 Sir Edward Albert Galt  
 H. H. Chief of Maler Kotla  
 H. H. Chief of Sirmur  
 Sir William Henry Clark  
 Sir William Stevenson Meyer  
 Lieut.-General Sir Arthur Arnold Barrett  
 Lt.-Col. Sir Percy Zachariah Cox  
 Sir Steyning William Edgerley  
 Sir Harrington Verney Lovett  
 Sir Robert Woodburn Gillan  
 Maharaj Sri Sir Bhalron Singh Bahadur  
 Sir Alexander Gordon Cardew  
 Lieut.-Col. Sir Hugh Daly

### Companions (C. S. I.)

Lieut.-Col. William Dickinson  
 Gen. Sir Peter Stark Lumden  
 Major-Gen. Beresford Lovett  
 Major-Gen. Phillip Durham Henderson  
 Col. Leopold John Herbert Grey  
 Sir George Christopher Molesworth Birdwood  
 Major-Gen. Henry Wyllie  
 Sir Henry William Primrose  
 Herbert John Reynolds  
 Lieut.-Gen. Michael Weekes Willoughby  
 Raja Piarl Mohan Mukharji of Uttarpara  
 Sir Frederick Russell Hogg  
 Col. Charles Edward Yate  
 William Rudolph Henry Merk  
 Chhatrapati Jagirdar of Alipura  
 Col. John Clerk  
 James Richard Naylor  
 David Robert Lyall  
 Sardar Jiwan Singh, of Shahzadpur  
 Col. George Herbert Trevor  
 Col. Frederick J. Home  
 Lieut.-Col. Henry St. Patrick Maxwell  
 Sir Jervoise Athelstane Baines  
 Sir Thomas Salter Pyne  
 Alan Cadell  
 Arthur Forbes  
 Sir Arthur Upton Fanshawe  
 Col. George Fletcher Otley Boughey  
 James Fairbairn Finlay  
 Joseph Parker  
 Charles Walter Bolton  
 Horace Frederick D'Oyly Moule  
 Surg.-Gen. James Cleghorn  
 Col. Thomas Gracey  
 Col. James Aloysius Miley  
 Sir Henry Babington Smith  
 Henry Aiken Anderson  
 Lieut.-Col. Sir Arthur Henry McMahon  
 Sir Henry Evan Murchison James  
 James Knox Spence  
 Charles William Odling  
 Alexander Walmesley Cruickshank  
 David Norton  
 Thomas Stoker  
 Sir Edward Richard Henry  
 Lucas White King  
 Sir Mackenzie Dalzell Chalmers  
 Surgn.-Gen. David Sinclair  
 Henry Farrington Evans  
 Lt.-Col. John Muir Hunter

Richard Gillies Hardy	Charles Ernest Year Goument
Sir Frederick Robert Upcott	Herbert Lovely Eales
Herbert Charles Fanshawe	George Gilbert White
Sir Frederick Styles Philipin Lely	Frederick Beadon Bryant
George Robert Irwin	Frank George Sly
Lieut.-Gen. Sir George Lloyd Relliy Richardson	George Moss Harriott
Robert Burton Buckley	Ernest Herbert Cooper Walsh
Arthur Frederick Cox	Edward Vere Levinge
Charles Gerwien Bayne	Robert Nathan
Hartley Kennedy	Arthur Meredith
Sir Edwin Grant-Burris	Lieut.-Col. Charles Archer
Major-Gen. Trevor Bruce Tyler	James Peter Orr
William Charles Macpherson	Herbert Alexander Casson
Lt.-Col. James Alexander Lawrence Montgomery	William Axel Hertz
Lt.-Gen. Henry Doveton Hutchinson	Mahadev Bhaskar Chaubal
Raja of Burdwan	George Seymour Curtis
Nawab of Pahasu	Brevet-Lieut.-Colonel Francis Aylmer Maxwell
Sardar Badan Singh of Malaudh	Brevet-Lieut.-Colonel Clive Wigram
Sir Thomas Gordon Walker	Herbert Thompson
Col. James White Thurburn	Rao Bahadur Nanak Chand
Alfred Brereton	Surgeon-General William Burney Bannerman
William Thomas Hall	Lieut.-Col. Sir John Ramsay
Richard Townsend Greer	Stuart Lockwood Maddox
Col. Robert Henry Jennings	Gilbert Thomas Walker
Sir Louis William Dane	Lieut.-Col. Phillip Richard Thornhagh Gurdons
Sir Alfred Macdonald Bulteel Irwin	Khan Zulfikar Ali Khan of Maler Kotla
Col. James Bird Hutchinson	Surgeon-General George Francis Angelo Harri
Raja Ram Pal of Kotlehr	Edmund Vivian Gabriel
Hermann Michael Kisch	John Stuart Donald
Sir Cecil Michael Wilford Brett	Henry Montague Segundo Mathews
Herbert Bradley	Arthur Crommellin Hankin
Sir Frank Campbell Gates	Faridoonji Jamsheidi
John Mitchell Holms	Maulvi Ahmad Hussain
Percy Seymour Vessey Fitzgerald	Horace Charles Mules
Lt.-Col. Willoughby Pitcairn Kennedy	H. H. Raja Bijie Chand, Chief of Kahlur
Raja Narendra Chand	Lieut.-Col. Arthur Russell Aldridge
Arthur Delaval Younghusband	Lieut.-Col. Mathew Richard Henry Wilson
Oscar Theodore Barrow	John Charles Burnham
Col. Howard Goad	Col. Thomas Francis Bruce Renny-Tallyour
Francis Alexander Slacko	Michael Kennedy
Salyid Husain Bilgrami	Thakor Karansinghji Vajirajji
Percy Comyn Lyon	Meherban Mudhojirao Jaurao Naik Nimbalkar
Algernon Robert Sutherland	Lieut.-Col. Alain Chartier de Lotbiniere Joly de
Sir George Watson Shaw	Lotbiniere
William Arbuthnot Inglis	Major-General Sir Herbert Vaughan Cox
Romer Edward Younghusband	Brev.-Col. Robert Smelton MacLagan
Major-General Herbert Mullaly	Lieut.-Col. Charles Mowbray Dallas
John Alexander Broun	Edward Henry Scamander Clarke
Col. Henry Finnis	Jagadish Chandra Bose
Maj.-Gen. Sir Alfred William Lambart Bayly	Abbas Ali Balg
Maurice Walter Fox-Strangways	Oswald Campbell Lees
William Lochiel Sapte Lovett Cameron	Lt.-Col. G. G. Giffard
Sir Edward Douglas MacLagan	F. W. Johnston
Raja Madho Lal	William Henry Lucas
John Stratheden Campbell	A. L. Saunders
Lieut.-Col. Charles Herbert	Vakhatsinghji Kesrisinghji
Sir Ashutosh Mukharji	Paul Gregory Melitus
Maj.-Gen. Sir Henry Montague Pakington	Lieut.-Col. Albert Edward Woods
Hawkes	William Exall Tempest Bennett
Dr. Sir Rash Behari Ghosh	Hon. Maj. Nawabzada Obaidullah Khan
Francis Capel Harrison	William Ogilvie Horne
Comdr. Sir Hamilton Pym Freer-Smith	William Harrison Moreland, C.I.E.
Andrew Edmund Castle Stuart	Diwan Bhdr. Chaube Raghunath Das, of Kotah
Norman Goodford Cholinsley	Col. Lestock Hamilton Reid
Walter Francis Rice	Surgeon-General Henry Wickham Stevenson
Havilland Le Mesurier	Hon. Lieut.-Col. Raja of Lambagraon
Claud Hamilton Archer Hill	Lionel Davidson
Cecil Edward Francis Bunbury	George Carmichael
Major General Reginald Henry Mahon	Lieut.-Col. Donald John Campbell MacNabb
Capt. Allen Thomas Hunt	Lieut.-Col. Henry Walter George Cole
Walter Badock	Stuart Mitford Fraser
James Mollison	Henry Venn Cobb
Pirajirao Bapu Sahib Ghatge	Behari Lal Gupta
John Walter Hose	Henry Wheeler

F. W. Newmarch  
 Sardar Daljit Singh of Jullunder  
 Lt.-Col. Raj Kumar Bir Bikram Singh  
 Walter Maude  
 Bertram S. Carey  
 Michael Netherlands  
 Henry Ashbrooke Crump  
 William James Reid  
 Mysore Kantharaj Urs  
 O. V. Bosanquet  
 Walter Gunnell Wood  
 John Cornwallis Godley  
 A. Butterworth  
 S. M. Edwardes  
 N. D. Beatson-Bell  
 Lt.-Col. F. H. Elliott  
 Major General R. C. O. Stuart  
 H. J. Maynard  
 R. F. Russell  
 J. B. Brunyate  
 Lt.-Col. A. B. Lew  
 W. M. Italey  
 R. T. Keeling  
 A. H. Grant  
 H. Sharp.  
 L. C. Porter  
 R. E. Scott  
 Lieut.-Col. J. W. E. Douglas-Scott Montagu  
 Rear-Admiral Arthur Hayes-Sadler  
 Laurence Robertson  
 John Ghest Cumming  
 Lieut.-Col. Stephen Lushington Aplin  
 Sir James Houssemayne DuBoulay  
 John Barry Wood

#### OFFICERS OF THE ORDER.

Secretary, J. B. Wood  
 Registrar, Col. Sir Douglas Dawson

### The Most Eminent Order of the Indian Empire.

This Order, instituted by H. M. Queen Victoria, Empress of India, Jan. 1st, 1878, and extended and enlarged in 1886, 1887, 1892, 1897, and 1902, is conferred for services rendered to the Indian Empire, and consists of the Sovereign, a Grand Master, thirty-two Knights Grand Commanders (of whom the Grand Master is first and principal), ninety-two Knights Commanders, and an indefinite number of Companions (not exceeding, without special statute, 20 nominations in any one year); also Extra and Honorary Members over and above the vacancies caused by promotion to a higher class of the Order, as well as certain Additional Knights and Companions appointed by special statute Jan. 1st, 1909, commemorative of the 50th Anniversary of the assumption of Crown Govt. in India.

The Insignia are: (i) The COLLAR of gold, formed of elephants, lotus flowers, peacocks in their pride, and Indian roses, in the centre the Imperial Crown, the whole linked together with chains; (ii) The STAR of the Knight Grand Commander, comprised of five rays of silver, having a small ray of gold between each of them, the whole alternately plain and scaled, issuing from a gold centre, having thereon Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatrix Auspicio*, and surmounted by an Imperial Crown gold; (iii) The BADGE, consisting of a rose, enamelled gules, barbed vert, and having in the centre Her Majesty Queen Vic-

tor's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatrix Auspicio*, surmounted by an Imperial Crown, also gold; (iv) The MANTLE is of Imperial purple satin, lined with and fastened by a cordon of white silk, with purple silk and gold tassels attached. On the left side a representation of the Star of the Order.

A Knight Commander wears: (a) around his neck a ribbon two inches in width, of the same colour (purple) and pattern as a Knight Grand Commander, pendent therefrom a badge of smaller size; (b) on his left breast a star, similar to that of the first class, but the rays of which are all of silver.

The above mentioned Insignia are returned at death to the Central Chancery, or if the Knight was resident in India to the Secretary of the Order at Calcutta.

A Companion wears from the left breast a badge (not returnable at death) of the same form as appointed for a Knight Commander, but of smaller size, pendent to a like ribbon of the breadth of one and a half inches.

**Sovereign of the Order:**—The King  
 Emperor of India.

**Grand Master of the Order:**—Baron  
 Chelmsford.

**Honorary Knights Grand Commanders,**  
 (G. C. I. E.)

The ex-Emperor of Korea

Shaikh Sir Khazal Khan, Shaikh of Mohammerah  
 and Dependencies.

**Extra Knight Grand Commander**  
 (G. C. I. E.)

The Duke of Connaught

**Knights Grand Commanders (G.C.I.E.)**

Lord Reay  
 The Rao of Cutch  
 Lord Lansdowne  
 Lord Harris  
 The Nawab of Tonk  
 Sir James Lyall  
 Lord Elgin  
 The Wall of Kalat  
 Lord Sandhurst  
 Maharaja of Karaul  
 Thakur Sahib of Gondal  
 Thakur Sahib of Morvi  
 Sir George Faudel-Phillips  
 The Maharaja of Benares  
 Sir Sher Muhammad Khan of Palampur  
 Lord Curzon of Kedleston  
 The Maharaja of Jaipur  
 The Maharaja of Orchha  
 Lord Amphilil  
 Maharao of Bundi  
 General Sir Alfred Gaselee  
 The Maha Rao of Sirohi  
 The Aga Khan  
 The Maharaja of Travancore  
 Lord Lamington  
 The Begam of Bhopal  
 Sir Edmond Ellis  
 The Nawab of Janjira  
 Sir Walter Laurence  
 Sir Arthur Lawley



The Maharaja of Bikaner  
 The Maha Rao of Kotah  
 Lord Sydenham  
 The Nawab of Rampur  
 Maharaj Sir Kishen Parashad  
 Lord Hardinge  
 Lord Carmichael  
 Maharaja of Kashmir  
 Sir Louis Dane  
 Maharaja of Bobbili  
 Lord Stamfordham  
 Sir Guy Fleetwood Wilson  
 Sir John Jordan  
 The Maharana of Udaipur  
 The Maharaja of Patiala  
 The Mir of Khairpur  
 The Raja of Cochin  
 Lord Pentland  
 The Raja of Pudukottai  
 Lord Willingdon  
 Maharaja of Kolhapur  
 The Yuvaraja of Mysore  
 Sir Charles Stuart Bayley  
 Maharaja of Darbhanga  
 H. H. the Maharaja of Jind

#### Honorary Knights Commanders (K. C. I. E.)

Sir Leon E. Clement-Thomas  
 H. E. Sir Hussein Kuli Khan, Mokher-ed-  
 Dowlet  
 Dr. Sven Hedin  
 The Sultan of Shehr and Mokalla  
 Prince Ismail Mirza, Amir-i-Akram  
 Cavaliere Filippo De'Filippi  
 General Sir Bader Shum-Shore Jung Bahadur  
 Rana of Nepal

#### Knights Commanders (K. C. I. E.)

Sir Alexander Meadows Rendel  
 Sir George Christopher Molesworth Birdwood  
 Surg.-Gen. Sir Benjamin Simpson  
 Sir Albert James Leppoc Cappel  
 Sir Donald Mackenzie Wallace  
 Sir Alfred Woodley Croft  
 Sir Bradford Leslie  
 Sir Arthur Baron Carnock  
 Sir Guildford Molesworth  
 Sir Frederick Russell Hogg  
 Sir Henry Mortimer Durand  
 Sir Arthur George Macpherson  
 Sir Henry Stuart Cunningham  
 Raja of Lunawara  
 Sir Roper Lethbridge  
 Sir Edward Charles Kayll Ollivant  
 Sir Henry Hoyle Howorth  
 Sir Henry Seymour King  
 Sir John Lambert  
 Baron Inchcape  
 Col. Sir Henry Ravenshaw Thuillier  
 Sir Wm. R. Brooke  
 Maharaja of Gidhaur  
 Lieut.-Col. Sir Adelbert Cecil Talbot  
 H. H. Maharaja of Ajalgarh  
 Sir Henry William Bliss  
 Nawab of Loharu  
 Sir John Jardine  
 Rear-Admiral Sir John Hext  
 Sir Mancherjee Bhownagree  
 Col. Sir Thomas Holdich  
 Sir Andrew Wingate  
 Raja Sir Harnam Singh, Ahluwalia

Sir S. Subramaniya Aiyar  
 Sir Alexander Cunningham  
 Sir Henry Evan Murchison James  
 Nawab Sir Shahbaz Khan, Bugti of Baluchistan  
 Sir James George Scott  
 Sir Lawrence Hugh Jenkins  
 Sir Herbert Thirkell White  
 Surg.-Gen. Sir Benjamin Franklin  
 Sir Frederick Augustus Nicholson  
 Sir Arthur Upton Fanshawe  
 Raja Dhiraj of Shahpura  
 Sir Gangadhar Rao Ganesh, Chief of Miraj  
 (senior Branch)  
 Brevet-Col. Sir Buchanan Scott  
 Col. Sir John Walter Ottley  
 H. H. Raja of Sallana  
 Lieut.-Col. Sir Francis Edward Younghusband  
 Major-General Sir James R. L. Macdonald  
 Sri Sir Ugyen Wangchuk, Tongsa Penlop of  
 Bhutan  
 Sir Fredric Styles Philip Lely  
 Lt.-Col. Sir Arthur Henry McMahon  
 Gen. Sir Donald James Sim McLeod  
 Maharaja of Balrampur  
 Sir Francis Whitmore Smith  
 Nawab of Pahasu  
 Sir Thomas Gordon Walker  
 Sir Arthur Naylor Wollaston  
 Sir Thomas Henry Holland  
 Nawab of Hyderabad  
 Lieut.-Col. Sir George Olaf Roos-Keppel  
 H. H. Maharajadhiraja of Kishangarh  
 Raja of Mahmudabad  
 Sir Trevellyn Rashleigh Wynne  
 Sir Richard Morris Dane  
 Maharajadhiraja of Burdwan  
 Raja of Poonch  
 Prince Ghulam Muhammad Ali, Khan Bahadur  
 Sir William Stevenson Meyer  
 Sir Wilhelm Schlich  
 Sir Theodore Morison  
 Lieut.-Gen. Sir Robert Irvin Scallan  
 Sir John David Rees  
 Rear-Admiral Sir Edmond John Warre Slade  
 Sir John Benton  
 Sir Frederick William Duke  
 Sir Archdale Earle  
 Sir Charles Stewart-Wilson  
 Lieut.-Gen. Sir Malcolm Henry Stanley Grover  
 Sir Charles Raitt Cleveland  
 Lieut.-Gen. Sir Douglas Haig  
 Lieut.-Col. Sir Hugh Daly  
 Sir Henry Parsall Burt  
 Sir James Houssemayne DuBoulay  
 Sir Rajendra Nath Mukharji  
 Lieut.-Col. Sir Henry Beaufoy Thornhill  
 Sir Gangadhar Madho Chitnavis  
 H. H. Nawab of Jaora State  
 H. H. Raja of Sitamau State  
 Raj Sahib Sir Amarsinhji Banesinhji (Vankar)  
 Sir Ram Krishna Gopal Bhandarkar  
 Sir Michael Filose  
 Rear-Adm. Sir Collin Richard Keppel  
 Sir John Stanley  
 Sir Saint-Hill Eardley-Wilmot  
 Lieut.-Col. Sir Percy Zachariah Cox  
 Sir Francis Edward Spring  
 Maharaja Sri Sri Vickrama Deo  
 Rana Sir Sheoraz Singh (U P)  
 H. H. Maharaja of Alwar  
 H. H. Maharawal of Partabgarh  
 Diwan Bahadur Sir Seth Kasturchand Daga  
 H. H. Maharaja of Bijawar State, Bundelkhand

Gen. Sir Mowbray Thomson  
 Sir John Twigg  
 Sir George Abraham Grierson  
 Sir Maro Aurel Stein  
 Maj.-Gen. Sir Francis Henry Rutherford  
 Drummond  
 H. H. Maharawal of Dungarpur  
 Nawab Sir Bahram Khan  
 Sir Henry Alexander Kirk  
 Sir Alfred Gibbs Bourne  
 Chief of Jamkhandi  
 Sir Frank Campbell Gates  
 Sir George Macartney  
 Sir Edward Douglas MacLagan  
 Maj.-Gen. Sir George John Younghusband  
 Sir Brian Egerton.  
 Maharaja of Dinajpur.  
 Sir Stephen George Sale  
 Sir Prabhashankar D. Pattani  
 Maharaja of Kasimbazaar  
 Lieut.-Col. Sir John Ramsay  
 Sir William Maxwell  
 Sir Feridoonji Jamshedji, C.S.I.  
 Sir Mokshagundam Visvesvaraya  
 His Highness the Chief of Samthar  
 Sir John Stuart Donald  
 Lieut.-Col. Sir Percy Molesworth Sykes  
 Sir Edward Vere Levinge  
 Nawab Sir Syed Shams-ul-Huda  
 Raja Sir Rampat Singh  
 Sir Alexander Henderson Diack  
 Sir Sao Mawng  
 H. H. Raja Sir Arjun Singh of Narsingarh  
 Captain Malik Sir Umar Hayat Khan

#### Ex-Officio Companions (C. I. E.)

The Earl of Cromer  
 Sir Courtenay P. Ilbert

#### Honorary Companions (C. I. E.)

Laurent Marie Emile Beauchamp  
 Jean Etienne Justin Schneider  
 Haji Mohammad Ali Rais-ut-Tujjar.  
 James Carruthers Rhea Ewing.  
 Sheikh Abdulla Bin Esa, Sheikh Esa Bin Ali Al-  
 Khalifa of Bahrain  
 Shaikh Jabir bin Mubarak as Subah

#### Companions (C. I. E.)

Richard Kaye Puckle  
 Gen. William Gordon  
 Thomas Mitchell Gibbon  
 George Smith  
 Col. John H. Rivett-Carnac  
 Roscoe Bocquet  
 Pierre Francois Henri Nanquette  
 Stephen Paget Walter Vyvyan Luke  
 Sir Charles James Lyall  
 Charles Edward Pitman  
 Richard Isaac Bruce  
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 Lieut.-Col. Charles William Owen  
 George Felton Mathew  
 Sir Henry Christopher Mance  
 Maj.-Genl. Thomas Ross Church  
 Thakur Bichu Singh  
 John Faithfull Fleet  
 Rev. William Miller  
 Benjamin Lewis Rice  
 James Burgess  
 Mortimer Sloper Howell  
 Rai Bahadur Sarat Chandra Das  
 Maj.-Gen. Viscount Downe

Frederick Charles Kennedy  
 Sir George Watt, M.B.  
 Joseph Ralph Edward John Royle  
 Rai Mehta Punna Lalji  
 William Wordsworth  
 The Rt. Hon. Saiyid Ameer Ali  
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 Col. Charles Wemyss Muir  
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 Frederick Thomas Granville Walton  
 Major-Gen. Charles Smith Maclean  
 Major-Gen. James Cavan Berkeley  
 Charles Henry Tawney  
 Henry Irwin  
 Arthur H. Hildebrand  
 Sir James L. Walker  
 Surgn.-Maj. John Findlay  
 Rayner Childe Barker  
 Lieut.-Col. Charles Henry Ellison Adamson  
 Col. William Merriman, R.E.  
 Gen. William Percival Tomkins  
 Berthold Ribbentrop  
 Langton P. Walsh  
 Jeremiah G. Horsfall  
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 Lieut.-Col. Sir George L. Holford  
 Maj.-Gen. L. H. E. Tucker  
 James Edward O'Connor  
 Col. Thomas Holbein Hendley  
 Ernest Octavius Walker  
 Sir John Prescott Hewett  
 Mancherji Kavaji Murzban, Khan Bahadur  
 Lieut.-Col. Henry Percy Poindestre Leigh  
 Sir J. Bampfylde Fuller  
 George Pringle Rose  
 Diwan Ganpat Rai  
 Sir William Turner Threlton-Dyer  
 William B. Oldham  
 Major-Gen. G. F. L. Marshall  
 Edward Horace Mau  
 Bertram S. Carey  
 Lieut.-Gen. Sir G. L. R. Richardson  
 Paul Gregory Melitus  
 Col. Ernest H. Fenn  
 Lt.-Col. Sir Richard Carnac Temple  
 Edward C. S. George  
 Lt.-Col. J. Manners Smith  
 Col. Frank William Chatterton  
 Sri Ram Bhikaji Jatar  
 Fazulbhai Visram  
 Col. H. S. Jarett  
 Arthur C. Hankin  
 Adam G. Tytler  
 Charles E. Buckland  
 Alexander B. Patterson  
 Harry A. Acworth  
 Col. C. A. Porteous  
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 Maulvi Abdul Jabbar, Khan Bahadur  
 Col. W. R. Yelding  
 Henry J. Stanyon  
 Frederick John Johnstone  
 Col. Samuel Haslett Browne  
 Dr. Rash Behari Ghosh  
 Frank Henry Cook  
 Francis Erskine Dempster  
 Lieut.-Col. John Shakespear  
 Lieut.-Col. James John Macleod  
 Capt. Norman Franks  
 Sir William Earnshaw Cooper  
 Maharaj Rajashri Sankara Subbaiyar  
 Khan Bahadur Naoroji Pestonji Vakil  
 Col. Russell Richard Pulford

Col. Algernon George Arnold Durand  
 Gen. Sir Beauchamp Duff  
 Col. Robert Alexander Wauhope  
 Edwin Darlington  
 J. Strachan  
 Dr. Waldemar M. Haffkine  
 Dr. Augustus Frederick Rudolf Hoernle  
 Rustamji Dhanjibhai Mehta  
 Charles Godolphin William Hastings  
 Khan Bahadur Mancherji Rustamji Dholu  
 Col. John Charles F. Gordon  
 Charles Stewart Crole  
 Sir Benjamin Robertson  
 Duncan James Macpherson  
 John Campbell Arbuthnott  
 Sir Robert Warrender Carlyle  
 Henry Cecil Ferard  
 Robert Batson Joyner  
 Charles George Palmer  
 Lieut.-Col. Samuel John Thomson  
 Lieut.-Col. Frederick Fitzgerald MacCartie  
 Rai Bahadur Sir Bipin Krishna Bose  
 P. C. H. Snow  
 Hony. Lieut.-Col. Kunwar Bir Bikram Singh  
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 W. T. Van Someren  
 Charles Still  
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 A. Izat  
 Rai Bahadur Dhanpat Rai  
 Lieut.-Col. W. B. Browning  
 Lieut.-Col. J. J. Holdsworth  
 Francis Jack Needham  
 Robert Giles  
 Vishwanath Patankar Madhava Rao  
 Col. Walter Gawen King  
 James Sykes Gamble  
 Sir George William Forrest  
 Lieut.-Col. Frank Popham Young  
 Reginald Hawkins Greenstreet  
 Khan Bahadur Kazi Jalal-ud-din, Akhundzada,  
 or Kandahar  
 John Sturrock  
 John Stuart Beresford  
 Lieut.-Col. Malcolm John Meade  
 Edward Louis Cappell  
 Sir Lancelot Hare  
 George Moss Harriott  
 Frederick George Brunton Trevor  
 Diwan Bahadur P. Rajaratna Mudaliyar  
 Sir Walter Charleton Hughes  
 Edmund Penny  
 Henry Marsh  
 Lieut.-Col. Bertrand Evelyn Mellish Gurdon  
 Rai Bahadur Kailash Chandra Bose  
 Henry Felix Hertz  
 Courtenay Walter Bennett  
 H. H. Raja Sir Bhure Singh  
 Rear-Admiral Walter Somerville Goodridge  
 Col. Solomon Charles Frederick Pelle  
 Bertram Prior Standen  
 Henry Alexander Sim  
 Lieut.-Col. Sir James Robert Dunlop-Smith  
 Col. John Crimmin  
 Lieut.-Col. Granville Henry Loch  
 Fardunji Kuvorji Tarapurwala  
 Babu Kali Nath Mitter  
 Sir William Jameson Soulsby  
 Col. William John Read Rainsford  
 Col. Oswald Claude Radford  
 Major-General George Kenneth Scott-Moncrieff  
 Brig-General Thomas Edwin Scott  
 Lieut.-Col. Laurence Austine Waddell  
 General Asaf Ali Khan

Subadar-Major Sandar Khan  
 Hony. Capt. Yasin Khan  
 Commander Gerald Edward Holland  
 Sidney Preston  
 Sir Murray Hammick  
 Sir Alexander Pedler  
 Sir Richard Amphlett Lamb  
 Alexander Lauzun Pendock Tucker  
 Diwan Bahadur Kanchi Krishnaswami Rao  
 Lieut.-Col. John Clibborn  
 Col. George Wingate  
 Lieut.-Col. George Hart Desmond Gimlette  
 Arthur Henry Wallis  
 Alexander Johnstone Dunlop  
 George Herbert Dacres Walker  
 Rai Bahadur Nanak Chand  
 Sir Spencer Harcourt Butler  
 Lieut.-Col. Frank Cooke Webb Ware  
 Hony. Major Thomas Henry Hill  
 Alexander Porteous  
 Col. Thomas Elwood Lindsay Bate  
 Hon. Lockhart Mathew St. Clair  
 Marshall Reid  
 Itao Bahadur Pandit Sakhdeo Parshad  
 Stuart Mitford Fraser  
 Maj.-Gen. Francis Edward Archibald Chamier  
 Lt.-Gen. Ernest De Brath  
 Rai Bahadur Sir Pratul Chandar Chatterji  
 Walter Bernard de Winton  
 Algernon Elliott  
 Lt.-Col. Charles Arnold Kumball  
 Lieut.-Col. John Hodding  
 Edward Giles  
 Havilland Le Mesurier  
 Robert Nathan  
 Lieut.-Col. Alfred William Alcock  
 Arthur Hill  
 Douglas Donald  
 Jagadish Chandra Bose  
 Mehtar Shuja-ul-Mulk, of Chitral  
 Mir Muhammed Nazim Khan, Mir of Hunza  
 Raja Sikandar Khan, of Nagar  
 Sir William Dickson Cruickshank  
 Thomas Jewell Bennett  
 Henry Wenden  
 Charles Henry Wilson  
 Rao Bahadur Shyam Sundar Lal, Diwan of  
 Kishangarh  
 Robert Herriot Henderson  
 Mir Mehrulla Khan, Raisani  
 Nawab Fateh Ali Khan, Kazilbash  
 Charles Henry West  
 John Pollen  
 Charles Brown  
 George Huddleston  
 Lieut.-Col. Montagu William Douglas  
 Charles James Keene  
 Brigadier-General Havelock Hudson  
 Lieut.-Col. Arthur D'Arcy Gordon Bannerman  
 Rai Bahadur Gunga Ram  
 Robert Douglas Hare  
 William Bell  
 Claude Hamilton Archer Hill  
 Edward Henry Scamander Clarke  
 Webster Boyle Gordon  
 James Walker  
 Lieut.-Col. Robert Arthur Edward Benn  
 Madhu Sudhan Das  
 George James Perram  
 Raja Pertab Bahadur Sing  
 Sir C. Sankaran Nayar  
 William Ninnie Porter  
 Stephen Finney  
 Edward Waller Stoney

Alexander Monro	Maung Bah-Too
Walter Home	Col. Ernest William Stuart King Maconchy
C. W. Waddington	William Ellis Jardine
Khan Bahadur Barjorji Dorabji Patel	Thomas Corby Wilson
John Claude White	Major-General Alfred Horsford Bingley
Lieut.-Col. W. F. T. O'Connor	Sir Frederick Loch Halliday
Lionel Truninger	Percy Wyndham
Lieut.-Col. Robert Bird	Hugh Spencer
David Bayne Horn	Charles Ernest Low
Lieut.-Col. Charles Brooke Rawlinson	Cecil Ward Chichele-Plowden
Richard Grant Peter Purcell McDonnell	William King-Wood
Commander George Wilson	Lieut.-Col. Richmond Trevor Crichton
Captain Thomas Webster Kemp	Hkun Lai, Sawbwa of Laihka
William Harrison Moreland	Albert Claude Verrieres
Edward Sneade Boyd Stevenson	Diwan Bahadur P. Rajagopala Chariyar
Pirajirao Bapu Saheb Ghatge	Maulvi Rahim Baksh
Henry Robert Conway Dobbs	Muhammad Aziz-ud-din Khan
Surg.-Gen. William Richard Browne	Nilambar Mukharji
Montague de Pomeroy Webb	Rai Bahadur Kali Prasanna Ghosh
Hugh William Orange	Godfrey Butler Hunter Fell
Lieut.-Col. Charles Archer	John Newlands
Lionel Maling Wynch	Col. James Henry Elias Beer
Arthur William Uglov Pope	Lieut.-Col. Henry Parkin
Nicholas Dodd Beatson-Bell	Col. Robert Neil Campbell
George Frederick William Thibart	Montagu Sherard Dawes Butler
Major-General William Arthur Watson	Lieut.-Col. Stuart George Knox
Lt.-Col. Alain Chartier de Lotbiniere Joly de Lotbiniere	Capt. Cecil Godfrey Rawling
Major Aubrey John O'Brien	Edgar Thurston
Herbert Cunningham Clogston	Rai Bahadur Buta Singh
Thomas Robert John Ward	James Bennett Brunyate
Lieut.-Col. Charles Ferguson Campbell	Henry Wheeler
Brig.-Gen. Harry Davis Watson	Reginald Edward Enthoven
Hon. Derek William George Keppel	Col. Wilfred Malleson
Commander Sir Charles Leopold Cust	Henry Venn Cobb
Lt.-Col. Sir David Prain	Reginald Hugh Brereton
Col. William John Daniell Dundee	Nrittya Gopal Basu
Sir Ibrahim Rahimtoola	William Lochiel Berkeley Souter
Pandit Sundar Lal	Joseph John Mullaly
Edward Albert Gait	William Didsbury Sheppard
Robert Greig Kennedy	Col. Roderick Macrae
Hony. Col. Arthur Hills Gleadowe-Newcomen	Lieut.-Col. Victor Reginald Brooke
Edward Anthony Doran	Oswald Vivian Bosanquet
Col. Henry Thomas Pease	Tanjore Madava Rao Ananda Rao
Lieut.-Col. Malcolm Sydenham Clarke Campbell	John Hubert Marshall
Lieut.-Col. Arthur Le Grand Jacob	William Arthur Johns
John Bolster	Charles Michie Smith
John Stratheden Campbell	Lieut.-Col. Arthur Grey
Frederick Palmer	John Barry Wood
Shrimant Anand Rao Gaekwar	Lt.-Col. George Grant Gordon
Thomas Henry Stillingfleet Biddulph	Col. Frank Goodwin
Surg.-Lieut.-Col. Sir Warren Roland Crooke-Lawless	Lieut.-Col. George Frederick Chenevix-Trench
Lieut.-Col. Alexander John Maunsel MacLaughlin	Archibald Young Gibbs Campbell
George Claudius Beresford Stirling	Andrew Bigoe Barnard
Francis St. George Manners-Smith	James Adolpus Guider
Lieut.-Col. David Melville Babington	John Paul Warbarton
Samuel Digby	James William Douglas Johnstone
Pashamarneri Sundaram Aiyar Sivaswami Aiyar	James Herbert Seabrooke
Francis Guy Selby	Walter Culley Madge
Lieut.-Gen. William Riddell Birdwood	Lieut.-Col. Wallace Christopher Ramsay Stratton
William Herbert Dobbie	James Scott
Alfred Hamilton Grant	Lieut.-Col. Edward Charles Bayley
Lieut.-Col. John Norman MacLeod	Rai Bahadur Lala Sheo Prasad
Rear-Admiral George Hayley-Hewett	Frederick William Johnstone
Ralph Buller Hughes-Buller	Maj. Arthur Louis Bickford
Lieut.-Col. Francis Frederic Perry	Edward Gelson Gregson
Lt.-Col. Francis Granville Beville	William Malcolm Hailey
Diwan Bahadur Diwan Daya Kishen Kaur	Col. Benjamin William Marlow
Lieut.-Col. Stuart Hill Godfrey	Herbert Gerald Tomkins
Major Denys Brooke Blakeway	Henry Whitby Smith
Khan Bahadur Sahibzada Abdul Qaiyum Khan	Lt.-Colonel Francis Beville Prideaux
	Major Arthur Prescott Trevor
	Lieut.-Col. Ramsay Frederick Clayton Gordon
	Lieut.-Col. Charles MacTaggart
	Nawab Mirza Mahdi Hussain

Hopetoun Gabriel Stokes  
 Lieut.-Col. Leonard Rogers  
 Nawab Muhammad Abdul Majid  
 Ludovic Charles Porter  
 Henry Sharp  
 Arthur Venis  
 Mahamahopadaya Hara Prasad Shastri  
 Lt.-Col. Allen McConaghey  
 Nawab Kaiser Khan, Chief of the Magassi  
 Tribe  
 Rai Bahadur Diwan Jamiat Rai  
 Robert Charles Francys Volkens  
 Henry Hubert Hayden  
 Alexander Muirhead  
 Alexander Emanuel English  
 George Frederick Arnold  
 Maung Myat Tun Aung  
 George Cunningham Buchanan  
 William Rucker Stikeman  
 Edward Robert Kaye Blenkhusop  
 George Sanky Hart  
 Nawab Muhammad Salamullah Khan Bahadur,  
 Jagirdar of Deulghat  
 John Henry Kerr  
 Col. George Henry Evans  
 Lieut.-Col. Henry Burden  
 Maharaja Raghunath Singh, of Dhasuk  
 George William Kuchler  
 John Ghest Cumming  
 Rev. John Anderson Graham  
 Francis Hugh Stewart  
 Louis James Kershaw  
 William Taylor Cathcart  
 Maneekjee Byramjee Dadabhoy  
 Hugh Murray  
 Sawal Rao Raja Raghunath Rao Dinkar  
 (Gwallor)  
 Pandit Kailas Narayan Haksar  
 Lieut.-Col. Ernest Douglas Money  
 Major Hugh Roderick Stockley  
 Lieut.-Col. Richard Godfrey Jones  
 Jagirdar Desraj Urs  
 Lieut.-Colonel Armine Brereton Dew  
 Diwan Bahadur Diwan Amar Nath (Kashmir)  
 Lieut.-Col. James Reed Roberts  
 Lieut.-Col. Lawrence Impey  
 Col. Alexander William Macrae  
 Arthur Ernest Lawson  
 Albion Rajkumar Banerji  
 Major Frederick Penn Elwes  
 Col. William Burgess Wright  
 Cecil Archibald Smith  
 Sardar Shamsheer Singh, of the Jind State  
 Baba Gurbaksh Singh Bedi  
 Col. Gilbert Walter Palin  
 Lieut.-Col. Robert Edward Pemberton Pigott  
 Lieut.-Col. William Daniel Henry  
 Gerald Francis Keatinge  
 Major John Glennie Greig  
 Sardar Naoraji Pudarji  
 Vala Lakshman Meram, Chief of Thana-Devil  
 Claude Alexander Barron  
 Leonard William Reynolds  
 Charles Archibald Walker Rose  
 Major Arthur Dennys Gilbert Ramsay  
 Major Rudolph E. T. Hogg.  
 Major John Mackenzie  
 Pierce Langrishe Moore  
 Alfred Chatterton  
 Major Arthur Abercromby Duff  
 Lt.-Col. John Lawrence William French-Mullen  
 Bernard Coventry  
 Albert John Harrison  
 Richard Hamilton Campbell  
 Rao Bahadur Bangalore Perumal Annaswami  
 Mudallar  
 Sidney Kilner Levett-Yeats  
 Frederick George Wigley  
 Prafulla Chandra Ray  
 Col. Francis Raymond  
 Major-General Michael Joseph Tighe  
 Lieut.-Col. William Bernard James  
 Major Sydney D'Aguiar Crookshank  
 Edward Denison Ross  
 John Hugh Cox  
 Khan Bahadur Muhammad Israr Hasan Khan  
 Major Reginald O'Bryan Taylor  
 David Wann Alkman  
 Rai Bahadur Pandit Hari Kishan Kaul  
 Lt.-Col. Frederick William Wodehouse  
 Col. Richard Henry Ewart  
 Col. Atland Cowper  
 Thoma Walker Arnold  
 Lieut.-J. Charles Henry James  
 Rana Ji Singh of Dharni  
 Alexander Lake Shakespear  
 John Hope  
 Major Hugh Simpson  
 Major William Ewart  
 Lieut.-Col. Egan Henry de Vere Atkinson  
 Walter Stanley Albot  
 Frank Adrian Albot  
 Col. Robert Wike  
 Lieut.-Col. Walter Layard Dunlop  
 Hrishikesh Lal James Buchanan  
 Nalini Bhusan Gu  
 Joseph Terence O'Connell  
 Lieut.-Col. Townley Charles Filgate  
 Alexander Macdonald  
 Charles Cahill Sheridouse  
 Major Herbert de Lisle  
 Major William Wilfrid Lowsley  
 Hon. Col. John George Lowsley  
 Henry Cuthbert Street Lowsley  
 Lt.-Colonel Cecil Kaye  
 William Foster  
 Sardar Appaji Rao Ank  
 W. H. Arden-Wood  
 Sardar Arur Singh  
 W. C. Ashmore  
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 Capt. W. L. Campbell  
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 Frank Charles Daly  
 Mir Samsa Shah, Khan Baha  
 Haji Bukhsh Ellahie, Khan S.  
 Frank Edwin Gwyther  
 James Edgar Coventon  
 Louis E. B. Cobden-Ramsay

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Hebbalalu Velaur Nanjundayya  
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Capt. Walter Hugh Jeffery.  
Richard Meredith  
Albert Howard  
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Harold Arden Close.  
Richard Hugh Tickell  
Francis Samuel Alfred Slocock  
Lieut.-Col. Fitz Warren Lloyd.  
Major Arthur Leslie Jacob.  
Nawab Khair Baksh, Khan Bahadur  
Thomas Summers  
Henry James Wakely Fry  
Kiran Chandra De.  
Frank Willington Carter.  
Charles Montague King  
Sheikh Raiz Hussain, Khan Bahadur  
Edward Rawson Gardiner  
George Thomas Barlow  
Frederick Samuel Philip Swann  
Berkeley John Byng Stephens  
Mir Kamal Khan, Jam of Las Bela, Kalat  
Captain Walter Lumsden  
Colonel Dewan Bishan Das (Jammu and Kashmir)  
Major Frederic Gauntlett  
Major Samuel Richard Christophers  
Colonel George William Patrick Denny  
William Peter Sangster  
Montague Hill.  
Capt. Frederick Marshall Bailey.  
Sahibzada Abdus Samad, Khan of Rampur.  
Cecil Bernard Cotterell  
Alfred Windham Lushington  
Suleman Haji Kasim Mitha  
Captain George Pridmore Millett  
Ram Charan Mitra  
Lieut.-Col. Walter Thomas Grice  
Lieut.-Col. Hector Travers Denny  
Selwyn Howe Fremantle  
Zia-ud-din Ahmed  
Abdul Karim Abdul Shakur Jamal  
Lt.-Col. Cecil Charles Stewart Barry  
John Frederick Gruning  
Lt.-Col. Benjamin Holloway  
Major (Temp.) Lt.-Col. Cyril Mosley Wagstaff  
Arthur Robert Anderson  
Col. Charles Henry Cowie  
Kumat Maharaj Singh  
David Petrie  
Godfrey Charles D nham  
Lt.-Col. Charles Joseph Windham  
Herbert George Chick  
Lt.-Col. Charles Henry Dudley Rydner  
Geoffrey F. deMontmorency  
Raja Pratab Singh of Ali Rajpur  
Brig.-General Vere Bonamy Fane  
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Chunilal Hari Lal Setalvad  
John Andrew Turner  
Suresh Prasad Sarbadhikary  
John Norman Taylor  
Khan Bahadur Sardar Din Muhammad Khan  
Lionel Linton Tomkins  
Douglas Marshall Straight  
Moti Chund  
Matthew Hunter  
John Tarlton Whitty  
Moses Mordecai Simeon Gubbay  
Lieut.-Col. C. A. Muspratt-Williams  
Raja Bhagwat Raj Bahadur Singh of Sohawal  
Lt.-Col. Robert Charles MacWatt  
George Paris Dick  
Horatio Norman Bolton  
Major William John Keen  
Major William Magill Kennedy  
Sheikh Maqbul Husain  
brigadier-General Cyril Harcourt Roe  
Col. (Brig.-General) Oflcy Bohun Stovin Fair-  
less Shore.  
Lt.-Col. George Sim Ogg.  
Lieut.-Col. Charles Hugh Hodges Nugent  
Commander M. W. Farewell  
Major John B'rfran Cunliffe  
Evelyn Berkeley Howell  
Colonel William Montague Ellis  
Raja Venganad Vasudeva Raja  
Lieut.-Col. James Jackson  
James Anderson Dickson McEain  
Rao Bahadur Ganesh Krishna Satho  
Christopher Addams-Williams  
Rai Bahadur Banshidhar Banerji  
Hammett Reginald Clode Hailey  
Robert Thomas Dundas  
Reginald George Kirby  
Robert Egerton Purves  
Arthur Bradley Kettlewell  
Lala Ram Sarin Das  
Khan Bahadur Mian Muhammad Shaif  
Hugh Aylmer Thornton  
Charles Stewart Middlemiss  
Major Frederick Norman White  
John Loader Maffey  
Diwan Bahadur Tiwari Chhajuram  
Seth Chandmul Dhudha

OFFICERS OF THE ORDER.

Secretary, J. B. Wood  
Registrar, Col. Sir Douglas Dawson

The Imperial Order of the  
Crown of India.

This Order was instituted Jan. 1, 1878 and for a like purpose with the simultaneously created Order of the Indian Empire. It consists of the Queen and Queen Mother with some Royal Princesses, and the female relatives of Indian Princes or of persons who have held conspicuous offices in connection with India. Badge, the royal cipher in jewels within an oval surmounted by an Heraldic Crown and attached to a bow of light blue watered ribbon, edged white. Designation, the letters C. I.

Sovereign of the Order.

THE KING-EMPEROR OF INDIA.

Ladies of the Order (C. I.)

Her Majesty The Queen  
H. M. Queen Alexandra

H. M. the Queen of Norway	Baroness Kinloss
H. M. the Queen of Roumania	Dowager Countess of Mayo
H. R. H. the Princess Royal	Lady Jane Emma Crichton
H. R. H. the Princess Victoria	Dowager Countess of Lytton
H. R. H. the Princess Christian of Schleswig-Holstein	Dowager Baroness Lawrence
H. R. H. the Princess Louise (Duchess of Argyll)	Lady Temple
H. R. H. the Princess Henry of Battenberg	Dowager Baroness Napier of Magdala
H. I. and R. H. the Dowager Duchess of Saxe-Coburg and Gotha	Lady Grant Duff
H. R. H. the Duchess of Connaught	Dowager Marchioness of Dufferin and Ava
H. R. H. the Duchess of Albany	Lady Randolph Spencer-Churchill
H. R. H. the Duchess of Cumberland	Baroness Ricay
H. R. H. the Princess Frederica Baroness of von Pawel-Ilammungen	H. H. Maharani of Cooch Behar
H. R. H. the Dowager Grand Duchess of Mecklenburg-Strelitz	Marchioness of Lansdowne
H. I. & R. H. the Grand Duchess Cyrril of Russia	Baroness Harris
H. R. H. the Hereditary Princess of Hohenlohe Langenburg	H. H. Maharani of Gwalior
B. R. H. the Crown Princess of Sweden	Constance Mary Baroness Wenlock
H. R. H. the Princess Patricia of Connaught	H. H. Maharani Sahib Chhima Bai Gaekwar
H. R. H. the Princess Victoria Elizabeth Augustine Charlotte, Hereditary Princess of Saxe-Meiningen	H. H. Rani Sahib of Gondal
H. H. the Princess Victoria of Schleswig-Holstein	H. H. the Dowager Maharani of Mysore
H. H. the Princess Marie-Louise of Schleswig-Holstein	Lady George Hamilton
	H. H. the Maharani Sahiba of Udaipur
	Alice, Baroness Northcote
	Nora Henrietta, Countess Roberts
	Amelia Maria, Lady White
	Mary Katherine, Lady Lockhart
	Baroness Amptihill
	Countess of Minto
	Marchioness of Crewe
	H. H. Begum of Bhopal
	H. H. Maharani Shri Nundkanvarba

### THE KAISAR-I-HIND MEDAL.

This decoration was instituted in 1900, the preamble to the Royal Warrant—which was amended in 1901 and 1912—being as follows:—"Whereas We, taking into Our Royal consideration that there do not exist adequate means whereby We can reward important and useful services rendered to Us in Our Indian Empire in the advancement of the public interests of Our said Empire, and taking also into consideration the expediency of distinguishing such services by some mark of Our Royal favour: Now for the purpose of attaining an end so desirable as that of thus distinguishing such services aforesaid, We have instituted and created, and by these presents for Us, Our Heirs and Successors, do institute and create a new Decoration." The decoration is styled "The Kaisar-i-Hind Medal for Public Service in India" and consists of two classes. The Medal is an oval shaped Badge or Decoration—in gold for the First Class and in silver for the Second Class—with the Royal Cypher on one side and on the reverse the words "Kaisar-i-Hind for Public Service in India." It is suspended on the left breast by a dark blue ribbon.

#### Recipients of the 1st Class.

Abdus Samad Khan of Rampur  
 Ahmad, Khan Bahadur Qazi Khalil-ud-Din  
 Alnut, The Rev. Samuel Scott  
 Amarchand, Rao Bahadur Ramnarayan  
 Amptihill, Margaret, Baroness  
 Ashton, Albert Frederick  
 Barber, Benjamin Russell  
 Barnes, Major Ernest  
 Basu, Sir Kailas Chandra, Rai Bahadur  
 Beaty, Francis Montagu Algernon

Beck, Miss Emma Josephine  
 Bell, Lt.-Col. Charles Thorhill  
 Benson, Lady  
 Bentley, Dr. Charles Albert  
 Bhandari, Rai Bahadur Gopal Das  
 Bijni, Rani Abhayeswaridebi of  
 Bikanir, Maharaja of  
 Bingley, Major General Alfred  
 Biwalkar, Sardar Parashram Krishnarao  
 Bonig, Max Carl Christian  
 Booth-Tucker Frederick St. George de Lautour  
 Bosanquet, Oswald Vivian  
 Bramley, Percy Brooke  
 Bray, General Denys DeSaumarez, in Baluchistan  
 Broadway, Alexander  
 Brunton, James Forest  
 Buchanan, Rev. John  
 Burn, Richard  
 Burnett, General Sir Charles John  
 Calnan, Denis  
 Campbell, Colonel Robert Neil  
 Campion, John Montrieu  
 Carleton, Marcus Bradford  
 Carlyle, Lady  
 Carter, Edward Clark  
 Chandra, Rai Bahadur Hari Mohan  
 Chatterton, Alfred  
 Chaudhuri, Raja Sarat Chandra Rai  
 Chetty, Dewan Bahadur K. P. Puttanna  
 Chinal, Ardeshr Dinshaji  
 Chitnavis, Shankar Madho  
 Coldstream, William  
 Comley, Mrs. Alice  
 Copland, Theodore Brufey  
 Cousins, Henry  
 Cowasjee, Merwanjee  
 Cox, Arthur Frederick  
 Crawford, Francis Colomb

- Calkin, Rev. Dr. Peter  
 Dane, Lady  
 Darbhanga, Maharaja of  
 Das, Ram Saran  
 Davies, Arthur  
 Davies, Mrs. Edwin  
 Dawson, Brevet-Colonel Charles Hutton  
 Deane, Lieutenant-Colonel Herbert Edward  
 deLotbiniere, Lieutenant-Colonel Alain C. Joly  
 Dewas (Junior Branch), Raja of  
 Dhar, Her Highness the Rani Sahiba Luxmibai  
 Puar of  
 Dyal Singh, Sardar Man, Sardar Bahadur  
 DuBerni, James Enille  
 Dyson, Lieutenant-Colonel Thomas Edward  
 Earle, The Hon'ble Sir Archdale  
 Egerton, William  
 Ewing, The Rev. Dr. J. C. R.  
 Ferard, Mrs. Ida Margaret  
 Firth, Mrs. E. J. (with Gold Bar)  
 Francis, Edward Belcham  
 Gandhi, Mohandas Karamchand  
 Ghosal, Mr. Jyotsnanath  
 Glazebrook, N. S.  
 Glenn, Henry James Heamoy  
 Gonzaga, Rev. Mother  
 Graham, The Rev. John Anderson  
 Graham, Mrs. Kate  
 Grattan, Lieutenant-Colonel Henry William  
 Guilford, The Rev. E. (with Gold Bar)  
 Gwallor, Maharaja of  
 Gwyther, Lieut.-Colonel Arthur  
 Hahn, The Rev. Ferdinand  
 Haig, Lieutenant-Colonel Patrick Balfour  
 Hall, Harold Fielding Patrick  
 Hamilton, Major Robert Edward Archibald  
 Harvest, Lieut.-Colonel Herbert de Vere  
 Hildealey, The Rev. Alfred Herbert  
 Hodgson, Edward Marsden  
 Hogan, W. J. Alexander  
 Holderness, Sir Thomas William  
 Home, Walter  
 Howard, Mrs. Gabrielle Louise Caroline  
 Hume, The Rev. R. A.  
 Humphreys, Robert  
 Husband, Major James  
 Hutchinson, Sir Sydney Hutton Cooper  
 Hutchinson, Sir William Gordon  
 Hutwa, The Maharani Juan Manjari Kuori of  
 Hydari, Mrs. Amina  
 Irvine, Lieutenant-Colonel Thomas Walter  
 Ismail, Muhammad Yusuf  
 Ives, Harry William Maclean  
 Jacob, Colonel Sir Samuel Swinton  
 James, Lieutenant-Colonel Charles Henry  
 Jankibai  
 Joshi, Ram Bhau Meghasham, Rao Bahadur  
 Kapur, Raja Ban Bilari  
 King, Mrs. D.  
 Kirkpatrick, Clarence  
 Klopsch, Dr. Louis  
 Ko, Taw Sein  
 Kothari, The Hon'ble Mr. Jehangir Hormusji  
 Lamb, The Hon'ble Sir Richard Amplett  
 Lindsay, D'Arcy  
 Ling, Miss Catharine Frances  
 Lovett, The Hon'ble Mr. Harrington Verney  
 Luck, Wilfred Henry  
 Lukis, Lady  
 Lyall, Frank Frederick  
 Lyons, Surgeon-General Robert William Steele  
 Macnair, Lieutenant-Colonel Robert Charles  
 Madhava Rao Vahwanath Pattankar  
 Madhavan Nair, Dr. T.  
 Mahdi Husain, Nawab Mirza  
 Mahomed Ajmal Khan, Hakim, Hazik-ul-mulk  
 Malegon, Raja of  
 Malvi Tribhuvandas Narottamdas  
 Manners-Smith, The Hon'ble Mr. Francis  
 St. George  
 Mary of St. Paula, Rev. Mother  
 Mayes, Herbert Frederick  
 McCarrison, Major Robert  
 McCloghry, Colonel James  
 Miller, The Rev. William  
 Minto, Mary Caroline  
 Morgan, George  
 Muhammad Husain Khan, Khan Bahadur  
 Morrison, Honorary Captain James  
 Muir Mackenzie, Lady Therese  
 Murray, George Ramsay  
 Naidu, Mrs. Sarojini  
 Nanak Chand  
 Nariman, Dr. Temulji Bhikaji  
 Narsingharh, Her Highness the Rani Shiv Kunwar Sahiba of  
 Neve, Dr. Arthur  
 Newton, Dr. Henry Martyn  
 Nichols, the Rev. Dr. Charles Alvord  
 Nisbet, John  
 Noyce, William Florey  
 Oldham, Charles Evelyn Arbuthnot William  
 O'Meara, Major Eugene John  
 O'Donnel, Dr. Thomas Joseph  
 Pandit, Sitaram Narayan  
 Panna, Maharani of  
 Paranjpye, Raghunath Purshottam  
 Palky, Dr. Thomas Franklin  
 Phillips, Edwin Ashby  
 Pitcher, Colonel Duncan George  
 Plant, Captain William Charles Trew Gray  
 Gambier  
 Poynder, Lieutenant-Colonel John Leopold  
 Reid, Frederick David  
 Reynolds, Leonard William  
 Robson, Dr. Robert George  
 Rondy, The Very Rev. The Abbe Noel  
 Rost, Major Ernest Reinhold  
 Row, Dr. Raghavendra  
 Roy, Babu Harendra Lal  
 Roy, Rao Jogendra Narayan  
 Sailana, Raja of  
 Sell, The Rev. Canon Edward  
 Semple, Lieutenant Colonel Sir David  
 Samthar, Maharaja of  
 Sharp, Henry  
 Sharp, Walter Samuel  
 Shepherd, Rev. James  
 Sheppard, Mrs. Adeline B.  
 Sheppard, William Didsbury  
 Shillidy, the Rev. John  
 Shore, Lieutenant Colonel Robert  
 Shoubridge, Major Charles Alban Grevis  
 Singh, Raja Bhagwan Bakhsish  
 Singh, Rai Hira  
 Singh, Raja Kamaleshwari Prashad  
 Sinha, Purnendu Narayan  
 Skinner, The Rev. Dr. William  
 Skreksrud, The Rev. Larsorsen  
 Smith, Lieutenant-Colonel Henry  
 Sorabji, Miss Cornelia  
 Southon, Major Charles Edward  
 Spence, Christina Philippa Agnes  
 St. Leger, William Douglas  
 St. Lucie, Reverend Mother  
 Stanes, Robert  
 Stokes, Dr. Williams  
 Sukhdeo Prasad, Pandit



Vaughan, Lieutenant-Colonel Joseph Charles Stölke

Venugopala, Raja Bahadur

Wadhwan, The Rani Sahib Sita Bai of

Wagner, Rev. Paul

Wake, Lieutenant-Colonel Edward St. Aubyn (with Gold Bar)

Wakefield, George Edward Campbell

Walker, Lady Fanny

Walter, Major Albert Elijah

Ward, Major Elliott Leamon

Wheeler, The Rev. Edward Montague

Whitton, The Rev. David

Wilkins, Lieutenant-Colonel James Sutherland

Wilkinson, Lieutenant-Colonel Edmund

Willingdon, the Lady

Wilson-Johnston, Joseph

Winter, Edgar Francis Latimer

Wood, Arthur Robert

Young, The Rev. John Cameron

Younghusband, Arthur Delaval

Younghusband, Lieutenant-Colonel Sir Francis Edward

## Recipients of the 2nd Class

Abul Fattah, Moulvi Salyed

Abdul Ghani

Abdul Hussain, Mian Bhai

Abdul Kadir

Abdul Majid Khan, Colonel Muhammad

Abdul Majid Khan

Abdur Rahim

Abdur Razzak Khan, Subadar

Adavani, Motiram Showkram

Advani, Mrs. Motiram S.

Agha Mohamed Khalil-Bin-Mohamed Karim

Ahmad, Mr. Mukhtar

All Shabash Shalkh

Alton, Rev. Frank Van

Amar Nath, Lala

Amar Singh

Anastase, Sister

Anderson, Andrew

Andrew, The Rev. Adam

Ansecomb, Major Allen Mellers

Antil, Jamsheerji Merwanji

Apte, Hari Narayan

Askwith, Miss Anne Jane

Atkinson, Lady Constance

Augustin, The Rev. Father

Aung, Mrs. Ula

Aziz Hussain, Khan Sahib Mir

Badr Parshad

Bahmanji Manchorji

Baker, Honorary Major Thomas

Banerji, Professor Jamini Nath

Banks, Dr. Charles

Bapat, Risaldar Sadashiva Krishna

Bardeley, Miss Jane Blissett

Blackham, Major Robert James

Blackwood, John Ross

Blake, The Rev. William Henry

Blenkinsop, Edward Robert Kaye

Bolster, Miss Anna

Borrah, Babu B. Uinarayan

Bose, Miss Karoth

Bose, Miss Mona

Bowen, Griffith

Brahmanand, Pundit

Brander, Mrs. Isabel

Bremner, Major Arthur Grant

Brock, Miss Lillian Winifred

Brough, The Rev. Anthony Watson

Browne, Charles Edward

Brown, Dr. Edith

Burt, Bryce Chudleigh

Cain, Mrs. Sarah

Campbell, The Rev. Andrew

Campbell, Miss Kate

Campbell, Miss Susan

Campbell, Miss Mary Jane

Campbell, The Rev. Thomas Vincent

Carr, Miss Emma

Carr, Thomas

Catherine, Sister

Cattell, Major Gilbert Landale

Cecilia, Sister Fannie

Chamberlain, The Rev. William Isaac

Chandler, The Rev. John Seudder

Chatterji, The Rev. K. C.

Chaudhuri, Purna Chandra

Chitale, Ganesh Krishna

Churchward, P. A.

Chyo, Leong

Clancey, John Charles

Clark, Herbert George

Clerke, Honorary Major Louis Arthur Henry

Clutterbuck, Peter Henry

Coombs, George Oswald

Correa, Miss Marie

Corthorn, Miss Alice

Cottle, Mrs. Adela

Coxon, Stanley William

Crow, Charles George

Cumming, James William Nicol

Cumming, The Rev. John Ernest

Cutting, Rev. William

Dalrymple-Hay, Charles Vernon

Dann, Rev. George James

Das, Ram, Lala

Das, Mathura, Lala

Das, Niranjan

Datta, Dr. Dina Nath Pritha

Dawe, Miss Ellen

Dawson, Mrs. Charles Hutton

Deane, George Archibald

Deodhar, Gopal Krishna

Deoji, Hazi Ahmed, Khan Sahib

deKantrow, Mrs. Mary Aphrasia

Deemond, Sergeant J.

Dewes, Lieutenant-Colonel Frederick Joseph  
 Dexter, T.  
 Dhanpatrai, Sardar Bahadur  
 Dharm Chand, Lala  
 Dilshad Begum  
 Dip Singh, Thakur  
 Douglas, The Rev. John  
 Dun, Maung Ne  
 Dundas, Charles Lawrence  
 Dunlop, Alexander Johnstone  
 Durjan Singh, Thakur  
 Dutta, Mehta Harnam  
 Dwane, Mrs. Mary  
 Eagles, Thomas Cazaly  
 Eaglesome, George  
 Edgell, Lieutenant-Colonel Edward Arnold  
 Emanuel, Mrs.  
 Evans, The Rev. John Ceredig  
 Evans, Miss Josephine Annie  
 Faridoonji, Mrs. Hilla Rustamji  
 Farrer, Miss Ellen Margaret  
 Farzand-i-Ahmad, Khan Bahadur, Kazi Saiyid  
 Freynet, The Rev. Father Etienne  
 French, Lieutenant-Colonel Thomas  
 Flashman, Thomas Charles  
 Fleming, James Francis  
 Fletcher, Miss  
 Forman, The Rev. Henry  
 Fox, Alfred Charles  
 Frances, Sister Jane  
 Fraser, Robert Thomson.  
 Fy-on, Hugh  
 Gajjar, Mrs. Shivagaauri  
 Gaibibai Bai  
 Gandhi, Mr. Pestonji Jamsctji  
 Garthwaite, Liston  
 George, Miss Jessie Eleanor  
 Gilman, Edward P. Reuben  
 Godfrey, Thomas Leonard  
 Goenka, Baljnath  
 Goodbody, Mrs.  
 Gorman, Patrick James  
 Goswami, Sri Sri Naradev Dakhinpat Adhikar  
 Gowardhandas, Chatrabhuj  
 Grant, Lieut.-Colonel John Weymes  
 Grant, Mrs., nee Miss Lillian Blong  
 Grant, Miss Jean  
 Grant, Miss Maria Alice  
 Gray, Commissary William David  
 Greany, Peter Mawe  
 Greenfield, Miss R.  
 Griessen, Albert Edward Pierre  
 Gulliford, The Rev. Henry  
 Gumbley, Mr. Douglas  
 Gune, Trimbak Raghunath  
 Gyi, Maung Pet  
 Halyati Inabh Malik  
 Hanrahan, W. G.  
 Harrison, Henry  
 Harrison, Robert Tullis  
 Hart, Miss Louisa  
 Harvey, Miss Rose  
 Hatch, Miss Sarah Isabella  
 Haworth, Major Lionel Berkeley Holt  
 Hayes, Miss Mary Lavinia  
 Henderson, Miss Agnes  
 Higby, Miss Sarah J.  
 Higgins, Andrew Frank  
 Hill, Elliott  
 Hill, Henry Francis  
 Hoffman, The Rev. Father John, S.J.  
 Holbrooke, Major Bernard Frederick Roper  
 Holden, Major Hyla Napier  
 Holland, Dr. Henry Tristram

Homer, Charles John  
 Hope, Dr. Charles Henry Standish  
 Hughes, Frank John  
 Hunter, Honorary Captain James  
 Hutchison, Dr. John  
 Ibrahim, Moulvi Muhammad  
 Ihsan Ali  
 Jaijee Bai (Mrs. Petti)  
 Jainath, Atal Pandit  
 Jambusarvala, A. Horgovandas  
 Joglekar, Rao Sahib Ganesh Venkatesh  
 Johnson, Augustus Frederick  
 Jones, The Rev. John Peter  
 Jones, The Rev. Robert  
 Jones, The Rev. John Pengwern  
 Joshi, Trimbak Waman  
 Joss, Miss F.  
 Joti Prasad, Lala  
 Judd, C. R.  
 Jung, Sher, Khan Bahadur  
 Jwala Prasad, Mrs.  
 Jwala Singh, Sirdar  
 Kalubava, Azam Kesarkhan  
 Kanow, Yasuf  
 Kapadia, Miss Motilal  
 Karve, Dhondo Keshav  
 Kastur Chand Daga, Seth, Sir  
 Kelavkar, Miss Krishnabai  
 Kelly, Claude Cyril  
 Kelly, Miss Eleanor Sarah  
 Ker, Thomas  
 Khujoorma, Nadirshah Nowrojee  
 Kidar Nath, Lala  
 King, Robert Stewart  
 Kirloskar, Mr. Lakshman Kashinath  
 Knollys, Major Robert Walter Edmond  
 Knox, Major Robert Welland  
 Ko, Maung  
 Kothewala, Mulla Yusuf Ali  
 Kreyer, Lieutenant-Colonel Frederick August  
 Christian  
 Kugler, Miss Anna Sarah  
 Kyaw, Maung  
 Lang, John  
 Langhorne, Frederick James  
 Lankester, Dr. Arthur Colborne  
 Laughlin, Miss L. H. M.  
 Lawrence, Captain Henry Rundle  
 Lawrence, Henry Staveley  
 Leslie-Jones, Leicester Hudson  
 Lloyd, Miss Elizabeth  
 Locke, Robert Henry  
 Low, Charles Ernest  
 Lund, George  
 MacAllister, The Rev. G.  
 Mackenzie, Alexander McGregor  
 Mackenzie, Howard  
 Mackinnon, Miss Grace  
 Macleod, Lieut.-Colonel John Norman  
 Mackellar, Dr. Margaret  
 Macphail, The Rev. James Merry  
 Macphail, Miss Alexandrina Matilda  
 Macrae, The Rev. Alexander  
 Madan, Mr. Rustamji Hormasji  
 Maddox, Lieutenant-Colonel Ralph Henry  
 Mahadevi, Srimati  
 Mahommed Allanur Khan  
 Maiden, J. W.  
 Maitra Babu Bhuban Mohan  
 Mailik, Sashi Bhusan  
 Maracan, Esmail Kadir  
 Marie, Sister  
 Marier, The Rev. Frederick Lionel  
 Mary, of St. Vincent, Sister

Mary, Sister Eleanor  
 McCowan, Oliver Hill  
 McDonald, Joseph James  
 McGregor, Duncan  
 Masani, Rustamji Pestonji  
 McKenzie, Miss Alice Learmouth  
 Mead, Rev. Cecil Silas  
 Mehta, Vaikunthal Lalubhai  
 Mitcheson, Miss  
 Mitra, Rajeswar  
 Mitter, Mrs.  
 Mohammed Khan  
 Moitra, Akhoy Kumar  
 Moore, Nursing Sister Dora Louisa Truslove  
 Moore, Miss Eleanor Louisa  
 Morris, Major Robert Lee  
 Motilal, Seth of Piparia  
 Mount, Captain Alan Henry  
 Moxon, Miss Lais  
 Mozumdar, Jadu Nath  
 Mudali, Valappakkam Daivasigomoni Than-  
 davarayan  
 Mudaliar, Bangalore Perumal Annaswami  
 Muhammad Yusuf, Shams-ul-Ulama, Khan  
 Bahadur  
 Mukharji, Babu Jogendra Nath  
 Mukharji, Babu Nagendra Nath  
 Muller, Miss Jenny  
 Muller, Osvald Valdomar  
 Murlidhar  
 Murphy, Edwin Joseph  
 Myat, Maung Ittoon  
 Nabi Baksh  
 Nag, Mrs. Sasi Mukhi  
 Naimullah, Mohamed  
 Naoum Abbo  
 Napier, Alan Bertram  
 Narain, Har  
 Narayan Pershad, Babu  
 Nariman, Khan Bahadur Manekji Kharsedji  
 Narayan Singh, Sardar  
 Narpal Singh, Babu  
 Nasrulla Khan, Mirza  
 Norris, Miss Margaret  
 O'Maung Po  
 O'Brien, Major Edward  
 O'Connor, Brian Edward  
 O'Hara, Miss Margaret  
 Old, Frank Shephard  
 Orman, Honorary Captain Charles Henry  
 Orr, Adolphe Ernest  
 Orr, James Peter  
 Outram, The Rev. A  
 Owen, Captain Robert James  
 Owen, C. B.  
 Pal, Babu Barada Sundar  
 Pallu, Major Rande Hariv  
 Pandit, Vasudeo Ramkrishna  
 Parbati Bai, Mussammatt  
 Park, The Rev. George W.  
 Parsons, Richard  
 Parsons, Ronald  
 Patel, Barjorji Dorabji  
 Patel, Jeona  
 Pathak, Vitthal Narayan  
 Pathak, Ram Sahai  
 Paterson, Miss Rachel  
 Patrick, Sister  
 Perroy, Rev. Father  
 Pennell (nee Sorabji), Mrs. Alice Maude  
 Peters, Lieutenant-Colonel Charles Thomas  
 Phalibus, Miss Rose Margaret  
 Pierce, Miss Ada Louise  
 Pillay, Chinnappa Singaravalu

Pinney, Major John Charles Digby  
 Pinto, Miss Preciosa  
 Plowden, Major Trevor Chichele  
 Powell, John  
 Prabhu, Anantrao Raghunath  
 Prasad, Capt. Tulsi of Nepal  
 Pribhdas Shevakram  
 Price, The Rev. Eustace Dickinson  
 Prideaux, Frank Winckworth Austice  
 Purshotamdas Thakurdas  
 Pyo, Maung Tet  
 Rai, Babu Ram Kinkar  
 Rai Chaudhuri, Parbati Sankar  
 Raikes, Mrs. Alice  
 Rait, Miss Helen Anna Macdonald  
 Raj Bahadur, Pandit  
 Ram, Mr. Bhagat  
 Ramchandra, Daji  
 Ramgopal, Mallani, Seth  
 Ram Singh, M.V.O.  
 Ranade, Mrs. Ramabal  
 Ranjit Singh  
 Rattansi Mulji  
 Ray, Harendra Nath  
 Ray, Babu Sarat Chandra  
 Raza Ali Khan, Sardar  
 Reel, Lady Lilian  
 Richardson, Mrs. Catherine Stuart  
 Rita, Stiffani Edward  
 Roberts, Captain Charles Stuart Hamilton  
 Robinson, James  
 Robinson, Lieutenant-Colonel William Henry  
 Banner  
 Rocke, Capt. Cyril E. A. Spencer  
 Roe, Brigadier-General Cyril Harcourt  
 Roe, Mrs. Edith Mary  
 Raushan, Lal, Lala  
 Rukmabai, Dr.  
 Rulach, Rev. George Bernard  
 Rustomji Faridoonji  
 Sadler, A. W. Woodward  
 Sahai, Ram  
 Sahani Ram Kall  
 Sahay, Lala Deonath  
 Saint Monica, The Rev. Mother  
 Salkield, Tom  
 Sanyal, Wasudeo Mahadeo  
 Samuels, Joseph  
 Savidge, Rev. Frederick William  
 Schultze, The Rev. Frederick Volkmar Paul  
 Scotland, Lieutenant-Colonel David Wilson  
 Shah, Babu Lal Behari  
 Shah, Mohamed Kamal, Salyid  
 Shah, Mohammad Nawaz  
 Shah, Reverend Ahmad  
 Shannath  
 Shore, Raghunath Balwant  
 Shircore, William  
 Shyam Bikh, Raja Francis Xavier  
 Shyam Sunder Lal  
 Simcox, Arthur Henry Addenbrooke  
 Simkins, Charles Wyllins  
 Simon, Sister M.  
 Sinclair, Reginald Leahy  
 Singh, Ajli Dhul  
 Singh, Bhai Takht  
 Singh, Didar  
 Singh, Babu Harnath  
 Singh, Makkhan  
 Singh, Babu Ramdhari  
 Singh, Sitla Baksh  
 Singh, Subadar Sher  
 Singh, Binaldar Major, Hanwant  
 Smith, Miss Ellen

Smith, The Rev. Frederick William Ambery  
 Smith, Mrs. Henry  
 Sommerville, The Rev. Dr. James  
 Sir Ram Kunwar, Thakurain  
 Starte, Oliver Harold Baptist  
 Steel, Alexander  
 Steele, The Rev John Ferguson  
 Stephens, John Hewitt  
 Stephens, Mrs Grace  
 Stevens, Mrs (Ethel)  
 Stevenson, Surgeon-General Henry Wickham  
 Stewart, Major Hugh  
 Stewart, Mrs. Lillian Dorothea  
 Stewart, Thomas  
 St Joseph, J. D.  
 Strip, Samuel Algernon  
 Stuart, Dr. (Miss) Gertrude  
 Sultan Ahmed Khan  
 Sunder Lal  
 Sundrabai, Bai  
 Surebhan Janji  
 Swainson, Miss Florence  
 Swiss, Miss Emily Constance  
 Taleyarkhan, Mr. Manekshah Cawasia  
 Talib Mehdi Khan, Malik  
 Tambe, Dr. Gopal Rao Ramchandra  
 Tarapurwalla, Fardunji Kuvaji  
 Taylor, Rev. Alfred Prideaux  
 Taylor, Mrs. Florence Prideaux  
 Taylor, John Norman  
 Tha, Maung Shwe  
 Thein, Maung Po  
 Theobald, Miss

Thomas, Mrs. Mabel Fox  
 Thomas, Samuel Gilbert  
 Thompson, R. C.  
 Thomson, Robert Douglas  
 Thomsen, The Rev. G. Nicholas  
 Thorn, Miss Bertha  
 Thoy, Herbert Dominick  
 Timothy, Samuel  
 Tok, Maung Ba  
 Tok, Maung Po  
 Tomkins, Lionel Linton  
 Tudball, Miss Emma  
 Umar Khan, Malik Zorawar Khan  
 Vaughan-Stevens, Dudley Lewis  
 Visvesvaraya, Mokshagundam  
 Wait, Robert William Hamilton  
 Wakefield, George Edward Campbell  
 Walawalker, P Baburao  
 Waller, Frederick Chighton  
 Wanless, Dr. William James  
 Wares, Donald Horne  
 Webb-Ware, Mrs. Dorothy  
 Weighell, Miss Anna Jane  
 Weir, Henry  
 Western, Miss Mary Priscilla  
 Wildman, Miss Elizabeth Annie  
 Wisoman, Honorary Captain Charles Shcliffe  
 Woerner, Miss Lydia  
 Wood, The Rev A.  
 Yerbury, Miss J.  
 Young, Dr. M. Y  
 Zahur-ul-Husain, Muhammad

## Indian Names and Titles.

There is a bewildering multiplicity of Indian titles, made all the more difficult inasmuch as there is a difference of nomenclature between the titles of Hindus and Mahomedans. Some titles are hereditary and represent ruling chiefs or those nominally such (and of these there are no less than some 620, whilst of the titles themselves some 200 are known); others are personal honours conferred on individuals by the Indian Government, and even then sometimes made hereditary. Yet again, there are numerous complimentary titles, or specifications of office, expressed in Hindu phrases, of which we have occasionally supplied the interpretations. It must be added that though *caste* is often figuring in the names it has nothing whatever to do with the titles. Amir, Khan, Mir, Sultan, Sri, &c., are confusingly used as both titles and names.

The order of rank is thus given by Sir R. Lethbridge in "The Golden Book of India."

**Hindu**—Maharaja Bahadur, Maharaja, Raja Bahadur, Raja, Rai Bahadur, Rai Sahib, Rai.

**Mohammedan**—Nizam, Nawab Bahadur, Nawab, Khan Bahadur, Khan Sahib, Khan.

**Parsis and Dene-Israelites**—Khan Bahadur, Khan Sahib.

**Afssur**—a corruption of the English "officer."

**Ahluwalia**—name of a princely family resident at the village of Ahlu, near Lahore.

**Akhundzada**—son of a Head Officer.

**Altjah** (Sindhi)—of exalted rank.

**Ali Raja**—Sea King (Laccadives).

**Amir** (corruptly *Emir*)—a Mohammedan Chief; often also a personal name.

**Asaf**—a Minister.

**Baba**—lit. "father;" a respectful "Mr.;" Irish "Your Honour."

**Babu**—strictly a 5th or still younger son of a Raja, but often used of any son younger than the heir, whilst it has also grown into a term of address—Esquire. There are, however, one or two Rajas whose sons are known respectively as—1st, Kunwar; 2nd, Diwan; 3rd, Thakur; 4th, Lal; 5th, Babu.

**Bahadur**—lit. "brave" or "warrior;" a title used by both Hindus and Mohammedans, often bestowed by Government; added to other titles it increases their honour, but alone it designates an inferior ruler.

**Bakhshi**—a revenue officer or magistrate.

**Begum** or *Begam*—the feminine of "Nawab" combined in Bhopal as "Nawab Begum."

**Bezar**—apparently a large land-owner.

**Bhonsle**—name of a Maratha dynasty.

**Bhup**—title of the ruler of Cooh Behar.

**Bhutti**—name of a Baluch tribe.

**Chhatrapati**—one of sufficient dignity to have an umbrella carried over him.

**Dada**—lit. "grandfather" (paternal); any venerable person.

**Daula** and *Dawlat*—State; also one in office.

**Deb**—a Brahminical priestly title; taken from the name of a divinity.

**Dhiraj**—"Lord of the Lands;" added to "Raja," &c., it means "paramount."

**Diwan**—a Vizier or other First Minister to a native Chief, either Hindu or Mohammedan, and equal in rank with "Sardar," under which see other equivalents. The term is also used of a Council of State.

**Elaya Raja**—title given to the heir of the Maharaja of Travancore.

**Farzand** (with defining words added)—"favorite" or "beloved."

**Fateh**—"victory."

**Fath Jeang**—"Victorious in Battle" (a title of the Nizam).

**Gackwar** (sometimes *Guicowar*)—title with "Maharaja" added of the ruler of Baroda. It was once a caste name and means "cowherd, i.e., the protector of the sacred animal; but later on, in common with "Holkar" and "Sindhia," it came to be a dynastic appellation and consequently regarded as a title. Thus, a Prince becomes "Gackwar" on succeeding to the estate of Baroda; "Holkar," to that of Indore; and "Sindhia," to that of Gwalior.

**Hafiz**—guardian.

**Haji**—one who has made pilgrimage to Mecca.

**Hiera Lal**—"diamond ruby."

**Holkar**—see "Gackwar."

**Jah**—a term denoting dignity.

**Jam** (Sindhi or Baluch)—Chief.

**Kazi**—(better written *Qazi*)—a Mohammedan magistrate.

**Khan**—originally the ruler of a small Mohammedan State, now a nearly empty title though prized. It is very frequently used as a name, especially by Afghans and Pathans.

**Khwaja**—a Persian word for "master," sometimes a name.

**Kunwar** or *Kumar*—the heir of a Raja.

**Lal**—a younger son of a Raja (strictly a 4th son, but see under "Babu").

**Lokendra** or *Lokindra*—"Protector of the World," title of the Chiefs of Dholpur and Dattia.

**Mahant**—a feudal title borne by the heads of a Hindu religious body.

**Maharaja**—the highest of hereditary rulers among the Hindus, or else a personal distinction conferred by Government. It has several variations as under "Raja," with the addition of *Maharaj Rana*; its feminine is *Maharani* (*maha*=great).

**Malik**—master, proprietor.

**Mian**—title of the son of a Rajput Nawab; resembling the Scottish "Master."

**Mir**—a leader, an inferior title which, like "Khan," has grown into a name. It is especially used by descendants of the Chiefs of Sind.

**Mirza**—if prefixed, "Mr." or "Esquire."

**Mong, Moung, or Maung** (Arakanese)—leader.  
**Moulti or Maulvi**—a learned man or teacher.  
**Mudaliyar or Mudliar**—a personal proper name, but implying "steward of the lands."  
**Mumtaz-ud-Daula**—distinguished in the State (*Mulk*, in the country).  
**Munshi**—president, or presiding official.  
**Myowun**—"Mr."  
**Nawab**—originally a Viceroy under the Moghal Government, now the regular leading title of a Mohammedan Prince, corresponding to "Maharaja" of the Hindus.  
**Nazim**—a ruler (not to be confused with following).  
**Nizam**—the title of the ruler of Hyderabad, the one Mohammedan Prince superior to Nawab.  
**Nono** (Thibetan)—the ruler of Spitta.  
**Pandi or Pundi**—a learned man.  
**Peshkup**—manager or agent.  
**Prince**—term used in English courtesy for "Shahzada," but specially conferred in the case of "Prince of Arcot" (called also "Armini-Arcot").  
**Raja**—a Hindu Prince of exalted rank, but inferior to "Maharaja." The feminine is *Rani* (Princess or Queen), and it has the variations *Raj*, *Rana*, *Rao*, *Rai*, *Rawal*, *Rawat*, *Raikwar*, *Raikbar*, and *Raikat*. The form *Rai* is common in Bengal, *Rao* in S. & W. India.  
**Raj Rajeshwar**—King of Kings.  
**Risaldar**—commander of a troop of horses.  
**Sahab**—the Native Hindu term used to or of a European ("Mr. Smith" would be mentioned as "Smith Sahab," and his wife "Smith Mem-Sahab," but in addressing it would be "Saheb," fem. "Saheba," without the name); occasionally appended to a title in the same way as "Bahadur," but inferior (=master). The unusual combination "Nawab Sahab" implies a mixed population of Hindus and Mohammedans.  
**Sahibzada**—son of a person of consequence.  
**Said, Sayid, Saiyid, Sidi, Syed, Syud**—various forms for a title adopted by those who claim direct male descent from Mohammed's grandson Husain.  
**Sardar** (corrupted to *Sirdar*)—a leading Government official, either civil or military, even a Grand Vizier. Nearly all the Punjab Barons bear this title. It and "Diwan" are like in value and used by both Hindus and Mohammedans. So, but Mohammedans only, are "Wali," "Sultan," "Amir," "Mir," "Mirza," "Mian," and "Khan."  
**Sawai**—a Hindu title implying a slight distinction (lit. one-fourth better than others).  
**Sawbwa** (Burmese)—a Chief.  
**Shahzada**—son of a King.  
**Shaikh or Sheikh** (Arabic)—a Chief.  
**Shams-ul-Ulama**—a Mohammedan title denoting "learned."  
**Shamshir-Jang**—"Sword of Battle" (a title of the Maharaja of Travancore).  
**Said**—a variation of "Said."

**Sinakhia**—see under "Gaekwar."  
**Sri or Shri**—lit. fortune, beauty: a Sanscrit term used by Hindus in speaking of a person much respected (never addressed to him; nearly—"Esquire"); used also of divinities. The two forms of spelling are occasioned by the intermediate sound of the *s* (that of *s* in the German *Stadt*).  
**Subadar**—Governor of a province.  
**Sultan**—like "Sardar."  
**Syed, Syud**—more variations of "Said."  
**Talukdar**—an Oudh landlord.  
**Talpur**—the name of a dynasty in Sind.  
**Thakur**—a Hindu term equivalent to "Bahadur," whether as affix or alone.  
**Tumandar**—a Persian word denoting some office.  
**Umar**—term implying the Nobles collectively.  
**Wali**—like "Sardar." The Governor of Khe-lat is so termed, whilst the Chiefs of Cabul are both "Wali" and "Mir."  
**Zemindar or Zamindar**—a landowner; orig. a Mohammedan collector of revenue.  
**Distinctive Badges.**—An announcement was made at the Coronation Durbar in 1911, that a distinctive badge should be granted to present holders and future recipients of the titles of 'Diwan Bahadur', 'Sardar Bahadur', 'Khan Bahadur', 'Rai Bahadur', 'Rao Bahadur', 'Khan Sahib', 'Rai Sahib' and 'Rao Sahib'. Subsequently the following regulations in respect of these decorations were issued:—(1) The decoration to be worn by the holders of the titles above mentioned shall be a badge or medallion bearing the King's effigy crowned and the name of the title, both to be executed on a plaque or shield surrounded by a five-pointed star surmounted by the Imperial Crown, the plaque or shield being of silver gilt for the titles of Diwan, Sardar, Khan, Rai and Rao Bahadur, and of silver for the titles of Khan, Rai, and Rao Sahib. (2) The badge shall be worn suspended round the neck by a ribbon of one inch and a half in width, which for the titles of Diwan and Sardar Bahadur shall be light blue with a dark blue border, for the titles of Khan, Rai and Rao Bahadur light red with a dark red border, and for the titles of Khan, Rai and Rao Sahib dark blue with light blue border.  
A Press Note issued in November, 1914, state:—The Government of India have recently had under consideration the question of the position in which **miniatures** of Indian titles should be worn, and have decided that they should be worn on the left breast fastened by a brooch, and not suspended round the neck by a ribbon as prescribed in the case of the Badge itself. When the miniatures are worn in conjunction with other decorations, they should be placed immediately after the Kaiser-i-Hind Medal.  
**Indian Distinguished Service Medal.**—This medal was instituted on June 28th, 1907, by an Army Order published in Simla as a reward for both commissioned and non-commissioned officers of the regular and other forces in India. It bears on the obverse the bust of King Edward VII, and on the reverse a laurel wreath encircling the words **For Distinguished Service**. The

medal,  $1\frac{1}{2}$  inches in diameter, is ordered to be worn immediately to the right of all war medals suspended by a red ribbon  $1\frac{1}{2}$  in. wide, with blue edges  $\frac{1}{2}$  in. wide. This medal may be conferred by the Viceroy of India.

**Indian Order of Merit.**—This reward of valour was instituted by the H. E. I. Co. in 1837, to reward personal bravery without any reference to length of service or good conduct. It is divided into three classes and is awarded to native officers and men for distinguished conduct in the field. On the advancement from one class to another the star is surrendered to the Government, and the superior class substituted, but in the event of the death of the recipient his relatives retain the decoration. The order carries with it an increase of one-third in the pay of the recipient, and in the event of his death the allowance is continued to his widow for three years. The First Class consists of a star of eight points,  $1\frac{1}{2}$  in. in diameter, having in the centre a ground of dark-blue enamel bearing crossed swords in gold, within a gold circle, and the inscription *Reward of Valour*, the whole being surmounted by two wreaths of laurel in gold. The Second Class star is of silver, with the wreaths of laurel in gold; and the Third Class entirely of silver. The decoration is suspended from a simple loop and bar from a dark-blue ribbon  $1\frac{1}{2}$  in. in width with red edges, bearing a gold or silver buckle according to class.

**Order of British India.**—This order was instituted at the same time as the Order of Merit, to reward native commissioned officers for long and faithful service in the Indian Army. Since 1878, however, any person European or native, holding a commission in a native regiment, became eligible for admission to the Order without reference to creed or colour.

The First Class consists of a gold eight-pointed radiated star  $1\frac{1}{2}$  in. in diameter. The centre is occupied by a lion statant gardant upon a ground of light-blue enamel, within a dark-blue band inscribed *Order of British India*, and encircled by two laurel wreaths of gold. A gold loop and ring are attached to the crown for suspension from a broad ornamental band  $\frac{3}{8}$  in. in diameter, through which the ribbon, once blue, now red, is passed for suspension from the neck. The Second Class is  $1\frac{1}{8}$  in. in diameter with dark-blue enamelled centre; there is no crown on this class, and the suspender is formed of an ornamental gold loop. The reverse is plain in both classes. The First Class carries with it the title *Sirdar Bahadur*, and an additional allowance of two rupees a day; and the Second the title of *Bahadur*, and an extra allowance of one rupee per day.

**Indian Meritorious Service Medal.**—This was instituted on July 27th, 1888, and on receipt of the medal the order states "a non-commissioned officer must surrender his *Long Service and Good Conduct medal*": but on being promoted to a commission he may retain the M. S. medal, but the annuity attached to it will cease. On the obverse is the diademed bust of Queen Victoria facing left, with a veil falling over the crown behind, encircled by the legend *Victoria Kaiser-i-Hind*. On the reverse is a wreath of lotus leaves enclosing a wreath of palm tied at the base, having a star beneath; between the two wreaths is the inscription for meritorious service. Within the palm wreath is the word *India*. The medal,  $1\frac{1}{2}$  in. in diameter, is suspended from a scroll by means of a red ribbon  $1\frac{1}{2}$  in. wide. The medals issued during the reigns of Queen Victoria's successors bear on the obverse their bust in profile with the legend altered to *EDWARDVS* or *GEORGIVS*.

## Laws and the Administration of Justice.

The indigenous law of India is personal and divisible with reference to the two great classes of the population, Hindu and Mahomedan. Both systems claim divine origin and are inextricably interwoven with religion, and each exists in combination with a law based on custom. At first the tendency of the English was to make their law public and territorial, and on the establishment of the Supreme Court at Calcutta in 1773 and the advent of English lawyers as judges, they proceeded to apply it to Europeans and Indians alike. This error was rectified by the Declaratory Act of 1780, which Parliament declared that as against Hindu the Hindu law and usage, and as against a Mahomedan the laws and customs of Islam should be applied. The rules of the Shastras and the Koran have been in some cases altered and relaxed. Instances can be found in the Bengal Sati Regulation Act of 1829; the Indian Slavery Act, 1843; the Caste Disabilities Removal Act of 1850; the Hindu Widows' Remarriage Act, 1856; and other Acts and Codes. To quote the Imperial Gazetteer, "A certain number of the older English statutes and the English common law are to a limited extent still in force in the Presidency Towns as applicable to Europeans, while much of the old Hindu and Mahomedan law is everywhere personal to their native fellow subjects, but apart from these, and from the customary law, which is as far as possible recognised by the Courts, the law of British India is the creation of statutory enactments made for it either at Westminster or by the authorities in India to whom the necessary law-giving functions have from time to time been delegated."

### Codification.

Before the transfer of India to the Crown the law was in a state of great confusion. Sir Henry Cunningham described it as "hopelessly unwieldy, entangled and confusing." The first steps toward general codification were taken in 1833, when a Commission was appointed, of which Lord Macaulay was the moving spirit, to prepare a penal code. Twenty-two years elapsed before it became law, during which period it underwent revision from his successors in the Law Membership, and especially by Sir Barnes Peacock, the last Chief Justice of the Supreme Court of Calcutta. The Penal Code, which became law in 1860, was followed in 1861 by a Code of Criminal Procedure. Substantially the whole criminal law of British India is contained in these two Codes. One of the most eminent lawyers who ever came to India, Sir James Stephen, said "The Indian penal code may be described as the criminal law of England freed from all technicalities and superfluities, systematically arranged and modified in some few particulars (they are surprisingly few) to suit the circumstances of British India. It is practically impossible to misunderstand the code." The rules of Civil Procedure have been embodied in the Code of Civil Procedure. The Indian Penal Code has from time to time been amended. The Code of Civil Procedure was remodelled in 1908 and the Code of Criminal Procedure in 1898. These Codes are now in force.

### European British Subjects.

Whilst the substantive criminal law is the same for all classes, certain distinctions of procedure have always been maintained in regard to criminal charges against European British subjects. Until 1872 European British subjects could only be tried or punished by one of the High Courts. It was then enacted that European British subjects should be liable to be tried for any offences by magistrates of the highest class, who were also justices of the peace, and by judges of the Sessions Courts; but it was necessary in both cases that the magistrate or judge should himself be a European British subject. In 1883 the Government of India announced that they had decided "to settle the question of jurisdiction over European subjects in such a way as to remove from the code at once and completely every judicial disqualification which is based merely on race distinctions." This decision, embodied in the Ilbert Bill, aroused a storm of indignation which is still remembered. The controversy ended in a compromise which is thus summarised by Sir John Strachey ("India"). "The controversy ended with the virtual, though not avowed, abandonment of the measure proposed by the Government. Act III of 1884, by which the law previously in force was amended, cannot be said to have diminished the privileges of European British subjects charged with offences, and it left their position as exceptional as before. The general disqualification of native judges and magistrates remains; but if a native of India be appointed to the post of district magistrate or sessions judge, his powers in regard to jurisdiction over European British subjects are the same as those of an Englishman holding the same office. This provision however is subject to the condition that every European British subject brought for trial before the district magistrate or sessions judge has the right, however trivial be the charge, to claim to be tried by a jury of which not less than half the number shall be Europeans or Americans.... Whilst this change was made in the powers of district magistrates, the law in regard to other magistrates remained unaltered." Since 1836 no distinctions of race have been recognised in the civil courts throughout India.

### High Courts

The highest legal tribunals in India are the High Courts of Judicature. These were constituted by the Indian High Courts Act of 1861 for Bengal, Bombay and Madras, and later for the United Provinces, superseding the old supreme and Sudder Courts. The Judges are appointed by the Crown; they hold office during the pleasure of the Sovereign; at least one-third of their number are barristers, one-third are recruited from the judicial branch of the Indian Civil Service, the remaining places being available for the appointment of Indian lawyers. Trial by jury is the rule in original criminal cases before the High Courts, but juries are never employed in civil suits in India.

For other parts of India High Courts have been formed under other names, the chief



difference being that they derive their authority from the Government of India, not from Parliament. In the Punjab and Burma there are Chief Courts, with three or more judges; in the other provinces the chief appellate authority is an officer called the Judicial Commissioner. In Sind the Judicial Commissioner is termed Judge of the Sudder Court and has two colleagues.

The High Courts are the Courts of appeal from the superior courts in the districts, criminal and civil, and their decisions are final, except in cases in which an appeal lies to His Majesty in Council and is heard by the Judicial Committee of the Privy Council in England. The High Courts exercise supervision over all the subordinate courts. Returns are regularly sent to them at short intervals and the High Courts are able, by examining the returns, by sending for proceedings, and by calling for explanations, as well as from the cases that come before them in appeal, to keep themselves to some extent acquainted with the manner in which the courts generally are discharging their duties.

#### Lower Courts.

The Code of Criminal Procedure provides for the constitution of inferior criminal courts styled courts of session and courts of magistrates. Every province, outside the Presidency towns, is divided into sessions divisions, consisting of one or more districts, and every sessions division has a court of session and a sessions judge, with assistance if need be. These stationary sessions courts take the place of the English Assizes, and are competent to try all accused persons duly committed, and to inflict any punishment authorised by law, but sentences of death are subject to confirmation by the highest court of criminal appeal in the province. Magistrates' courts are of three classes with descending powers. Provision is made and largely utilised in the towns, for the appointment of honorary magistrates; in the Presidency towns Presidency magistrates deal with magisterial cases and benches of Justices of the Peace or honorary magistrates dispose of the less important cases.

Trials before courts of session are either with assessors or juries. Assessors assist, but do not bind the judge by their opinions; on juries the opinion of the majority prevails if accepted by the presiding Judge. The Indian law allows considerable latitude of appeal. The prerogative of mercy is exercised by the Governor-General-in-Council and the Local Government concerned without prejudice to the superior power of the Crown.

The constitution and jurisdiction of the inferior civil courts varies. Broadly speaking, one district and sessions judge is appointed for each district; as District Judge he presides in its principal civil court of original jurisdiction; his functions as Sessions Judge have been described. For these posts members of the Indian Civil Service are mainly selected though some appointments are made from the Provincial Service. Next come the Subordinate Judges and Munsiffs, the extent of whose original jurisdiction varies in different parts of India. The civil courts, below the grade of District

Judge, are almost invariably presided over by Indians. There are in addition a number of Courts of Small Causes, with jurisdiction to try money suits up to Rs. 500. In the Presidency Towns, where the Chartered High Courts have original jurisdiction, Small Cause Courts dispose of money suits up to Rs. 2,000. As Insolvency Courts the chartered High Courts of Calcutta, Bombay and Madras have jurisdiction in the Presidency towns. In the mofussil similar powers were conferred on the District Courts by the Insolvency Act of 1906.

Coroners are appointed only for the Presidency Towns of Calcutta and Bombay. Elsewhere their duties are discharged by the ordinary staff of magistrates and police officers unaided by jurors.

#### Legal Practitioners.

Legal practitioners in India are divided into Barristers-at-Law, Advocates of the High Court, Vakils and Attorneys (Solicitors) of High Courts, and Pleaders, Mukhtars and revenue agents. Barristers and Advocates are admitted by each High Court to practise in it and its subordinate courts; and they alone are admitted to practise on the original side of some of the chartered High Courts. Vakils are persons duly qualified who are admitted to practise on the appellate side of the chartered High Courts and in the Courts subordinate to the High Courts. Attorneys are required to qualify before admission to practise in much the same way as in England. The rule that a solicitor must instruct counsel prevails only on the original side of certain of the High Courts. Pleaders practise in the subordinate courts in accordance with rules framed by the High Courts.

#### Organisation of the Bar.

At Calcutta, Madras, and Bombay there is a Bar Committee presided over, *ex officio*, by the Advocate-General. This body is elected by the barristers practising in each High Court, and its functions are to watch the interests of the Bar and to regulate its etiquette. At Allahabad, Lahore, Nagpore, and Rangoon a similar Bar Committee exists, but the electorate is extended to include the vakils or native pleaders, and the president is either the senior practising member of the Bar or the Government Advocate. In the larger Districts and Sessions Courts, an organisation representing the Bar is usually to be found, and in the subordinate Courts, including the Revenue Courts, similar machinery is generally in use. Pending an opportunity of detailed inquiries in India, these general descriptions must suffice.

#### Composition of the Bar.

A considerable change is occurring in the composition of the Indian Bar. The following extract from an informing article in the *Times* (May 25, 1914) indicates the character and incidence of this development: "During the last forty years, a striking change has taken place in the professional class. The bulk of practice has largely passed from British to Indian hands, while, at the same time, the profession has grown to an enormous extent. One typical illustration may be quoted. Attached to the Bombay High Court in 1871 there

were 88 solicitors, of whom 10 were Indian and 28 English, and 24 advocates, of whom 7 were Indian and 17 English. In 1911, attached to the same High Court, there were 150 solicitors, of whom more than 130 were Indian and the remainder English, and 250 advocates, of whom 16 only were English and the remainder Indian."

#### Law Officers.

The Government of India has its own law colleague in the Legal Member of Council. All Government measures are drafted in this department. Outside the Council the principal law officer of the Government of India is the Advocate-General of Bengal, who is appointed by the Crown, is the leader of the local Bar, and is always nominated a member of the Provincial Legislative Council. In Calcutta he is assisted by the Standing Counsel and the Government Solicitor. There are Advocates-General and Government Solicitors for Bombay and Madras, and in Bombay there is attached to the Secretariat a Legal Remembrancer and an Assistant Legal Remembrancer, drawn from the Judicial Branch of the Indian Civil Service. The Government of Bengal consults the Bengal Advocate-General, the Standing Counsel and the Government Solicitor, and has besides a Legal Remembrancer (a Civil Servant) and a Deputy Legal Remembrancer (a practising barrister); the United Provinces are equipped with a civilian Legal Remembrancer and professional lawyers as Government Advocate and Assistant Government Advocate; the Punjab has a Legal Remembrancer, Government Advocate and a Junior Government Advocate; and Burma a Government Advocate, besides a Secretary to the Local Legislative Council.

Sheriffs are attached to the High Courts of Calcutta, Madras and Bombay. They are appointed by Government, selected from non-officials of standing, the detailed work being done by deputy sheriffs, who are officers of the Court.

#### Law Reports.

The Indian Law Reports are published in four series—Calcutta, Madras, Bombay, and Allahabad, under the authority of the Governor-General in Council. They contain cases determined by the High Court and by the Judicial Committee on appeal from the particular High Court. These appeals raise questions of very great importance, and the Council of Law Reporting for England and Wales show their appreciation by printing the Indian Appeals in a separate volume, and have also compiled a digest of Indian Appeals covering the period 1874-1893. The other Provinces and States have series of reports issued under the authority either of the Judiciary or the State.

#### Legislative Power.

The supreme power of Parliament to legislate for the whole of India cannot be questioned. In practice, however, this power is little used, there being a majority of officials on the Imperial Legislative Council—a majority deliberately reserved in the India Councils Act of 1909—the Secretary of State is able to impose his will on the Government of India and to secure the passage of any measure he may frame, regardless of the opinion of the Indian authorities. Legislative Councils have been established both for the whole of India and for the principal provinces. Their constitution and functions are fully described in detailing the powers of the Imperial and Provincial Councils (q. v.). To meet emergencies the Governor-General is vested with the power of issuing ordinances, having the same force as Acts of the Legislature, but they can remain in force for only six months. The power is very little used. The Governor-General-in-Council is also empowered to make regulations, having all the cogency of Acts, for the more backward parts of the country, the object being to bar the operation of the general law and permit the application of certain enactments only.

#### Bengal Judicial Department.

Sanderson, Sir Laurence .. .. .	Chief Justice.
Teunon, The Hon'ble Mr. William, I.C.S. .. .	Puisne Judge.
Woodroffe, The Hon'ble Mr. John George, M.A., Bar-at-Law.	Ditto.
Mukharji, The Hon'ble Sir Ashutosh, Kt., C.S.I., M.A., D.L.	Ditto.
Richardson, The Hon'ble Mr. Thomas William, I.C.S., Bar-at-Law.	Ditto.
Walsley, The Hon'ble Mr. Hugh, I.C.S. .. .	Ditto.
Chitty, The Hon'ble Sir Charles William, Bar-at-Law.	Ditto.
Fletcher, The Hon'ble Mr. Ernest Edward, Bar-at-Law.	Ditto.
Groaves, The Hon'ble Mr. William, Esq. .. .	Ditto.
Chatterji, The Hon'ble Mr. Digamber, M.A., B.L. .. .	Ditto.
Chatterji, The Hon'ble Mr. Nalini Ranjan, M.A., B.L. .. .	Ditto.
Chandhuri, The Hon. Mr. Asutosh, Bar-at-Law .. .	Ditto.
Newbould, The Hon'ble Mr. B. B. .. .	Ditto.
Beachcroft, The Hon'ble Mr. Charles Porten, I.C.S. .. .	Ditto.

Bengal Judicial Department—*contd.*

Satyendra Prasanna Sinha, The Hon. Sir Kt., Bar-at-Law.	Advocate-General.
Mitra, The Hon'ble Mr Binod Chandra, Bar-at-Law.	Standing Counsel.
Kesteven, The Hon'ble Mr. Charles Henry .. ..	Government Solicitor.
Camell, John .. ..	Officiating Deputy Superintendent and Remembrancer of Legal Affairs. (Also officiating Superintendent.)
Orr, John Williams, Bar-at-Law.. ..	Deputy Superintendent and Remembrancer of Legal Affairs. (On leave)
Ram Charan Mitra .. ..	Senior Government Pleader.
Hume, J. T. .. ..	Public Prosecutor, Calcutta.
Hechle, James Herbert .. ..	Registrar, Keeper of Records, Taxing Officer, Accountant-General, and Scaler, etc., Original Jurisdiction.
Remfry, Maurice .. ..	Registrar in Insolvency.
Nalini Mohan Chatterji, Bar-at-Law .. ..	Master and Official Referee.
Ryder, George .. ..	Dy. Registrar.
Bonnaud, William Augustus, Bar-at-Law .. ..	Clerk of the Crown for Criminal Sessions.
Kirkham, Joseph Alfred .. ..	Secretary to the Chief Justice and Head Clerk, Decree Department.
Voitch, Harold Massyn, B.A., I.C.S. .. ..	Registrar and Taxing Officer, Appellate Jurisdiction.
Counsell, Frank Bertram .. ..	Deputy Registrar.
Paulet, Peter Sydenham .. ..	Sub <i>pro tem</i> Assistant Registrar.
Grey, Charles Edward, Bar-at-Law .. ..	Administrator-General and Official Trustee.
Bonnerjee, K. K. Shelly, Bar-at-Law .. ..	Official Receiver, sub. <i>pro tem</i> .
Dobbin, F. K., Bar-at-Law .. ..	Coroner of Calcutta.
Bose, B.D., Bar-at-Law .. ..	Offg. Editor of Law Reports.

## Bombay Judicial Department.

Scott, The Hon'ble Sir Basil, Kt., M.A., Bar-at-Law ..	Chief Justice.
Shah, The Hon'ble Mr Lallubhai Asharam, M.A., LL.B.	Puisne Judge.
Batchelor, The Hon'ble Sir Stanley Lockhart, Kt., B.A., I.C.S.	Ditto
Marten, The Hon. Mr. A. B. .. ..	Ditto.
Beaman, The Hon'ble Mr Frank Clement Offley, I.C.S.	Ditto.
Heaton, The Hon'ble Sir Joseph John, I.C.S. .. ..	Ditto.
McLeod, The Hon'ble Mr. Norman Cranston, B.A., Bar-at-Law.	Ditto.
Strangman, the Hon'ble Mr. T. J. .. ..	Advocate-General
French, George Douglas .. ..	Remembrancer of Legal Affairs.
Nissim, Joseph, M.A., LL.B., Bar-at-Law, I.C.S. ..	Assistant Remembrancer of Legal Affairs.
Nicholson, Eustace Ferrers .. ..	Government Solicitor and Public Prosecutor.
Slater, John Sanders, B.A., Bar-at-Law.. ..	Administrator-General and Official Trustee.
Abdeali Muhammad Ali Kazlji, B.A., LL.B., Bar-at-Law	Prothonotary, Testamentary and Admiralty Registrar.
Hirjibhai Hormasji Wadia, M.A. .. ..	Master and Registrar in Equity and Commissioner for taking Accounts and Local Investigations, and Taxing Officer.
T. W. Birkett .. ..	Sherriff.
Allison, Frederick William, B.A., I.C.S. .. ..	Registrar, Appellate Side.
Nasurwanji Dinshaji Gharda, B.A., LL.B. .. ..	Deputy Registrar and Scaler, Appellate Side.

**Bombay Judicial Department—contd.**

Lambert, E. T.	.. .. .	Coroner. (On leave.)
Nunan, Dr W.	.. .. .	Acting.
COURT OF THE JUDICIAL COMMISSIONER OF SIND		
Pratt, Edward Millard, I.C.S.	.. .. .	Judicial Commissioner. (on furlough).
Hayward, Maurice Henry Weston, LL.B., Bar.-at-Law	.. .. .	Additional Judicial Commissioner, Acting Judicial Commissioner.
Crouch, Henry Newton, LL.B., Bar.-at-Law	.. .. .	Additional Judicial Commissioner.
Fawcett, Charles Gordon Hill, I.C.S.,	.. .. .	Acting Additional Judicial Commissioner.

**Madras Judicial Department.**

Walls, The Hon'ble Sir John Edward Power, Kt., M.A., Bar.-at-Law.	Chief Justice. (On leave)
Abdur Rahim, The Hon'ble Mr., M.A., Bar.-at-Law	Puisne Judge (Officiating Chief Justice)
Oldfield, The Hon'ble Mr. Francis Du Pre, I.C.S.	Puisne Judge.
Spencer, The Hon'ble Mr. Charles Gordon, I.C.S.	Ditto.
Trotter, The Hon'ble Mr. Victor Murray Coult	Ditto.
Seshagiri Ayyar, The Hon. Mr. T. V., B. A., B. L.	Ditto.
Sadasiva Ayyar, The Hon'ble Diwan Bahadur T.	Ditto.
Ayling, The Hon'ble Mr William Bock, I.C.S.	Ditto.
Bakewell, The Hon'ble Mr. James Herbert, LL B., Bar.-at-Law.	Officiating Judge (Additional). (On furlough.)
Kumaraswami Shastri, The Hon'ble Diwan Bahadur C. V.	Officiating Judge (Additional).
Phillip, The Hon. Mr W. W. I C S.	Ditto.
Krishnan, The Hon. Mr. C., M. A.	Ditto.
Burn, The Hon'ble Mr John Gunn	Ditto.
Corbet, Frederick Hugh Mackenzie, Bar.-at-Law	Advocate-General (on leave)
Srinivasa Ayyangar, The Hon. Mr. K.	Officiating Judge (Additional); also Actg. Advocate-General.
Brighthwell, Henry	Government Solicitor.
Napier, Charles F., Bar.-at-Law	Government Pleader and Public Prosecutor
Adam, John, M A, Bar.-at-Law	Crown Prosecutor.
Grant, P. R., Bar.-at-Law	Law Reporter.
Odgers, The Hon'ble Mr. C. E., M.A., Bar.-at-Law	Administrator-General and Official Trustee.
Mackay, Charles Gordon, I.C.S.	Registrar.

**Assam Judicial Department.**

Abdul Majid, The Hon. Mr., B.A., LL.B, Bar.-at-Law	Judge and Superintendent and Remembrancer of Legal Affairs, Shillong.
Graham, John Fuller	Judge, Assam Valley Districts, Gauhati.
Jeffries, Francis Joseph	(On combined leave).
Liddell, Henry Crawford	Officiating District and Sessions Judge, Sylhet and Cachar.
Tara Pada Chatterji	Additional Do.

**Bihar and Orissa Judicial Department.**

Chamier, The Hon. Sir Edward Maynard Deschamps, Kt.	Chief Justice.
Roe, The Hon. Mr. Francis Reginald, I C S	Puisne Judge.
Atkinson, The Hon'ble Mr. Cecil, K.C.	Ditto.
Jwala Prashad, The Hon'ble Mr	Ditto.
Sharf ud-din, The Hon'ble Mr. Saiyid, Bar.-at-Law	Ditto.
Chapman, The Hon. Mr. Edmund Pelly, I.C.S.	Ditto (On leave.)
Mullick, The Hon'ble Mr. Basanta Kumar, I.C.S.	Ditto.
Manuk, Percival Paul Chater	Government Advocate.
Adami, The Hon'ble Mr., L.C.	Superintendent and Remembrancer of Legal Affairs.
Coutts, William Strachan, I.C.S.	Registrar.

**Burma Judicial Department.**

<b>Fox, The Hon'ble Sir Charles Edmund, Kt., Bar-at-Law.</b>	Chief Judge, Chief Court, Lower Burma
<b>Ormond, The Hon'ble Mr. Ernest William, B.A., Bar-at-Law.</b>	Judge.
<b>Twomey, The Hon'ble Mr. Daniel Harold Ryan, I.C.S., Bar-at-Law</b>	Judge.
<b>Robinson, The Hon'ble Mr. Sydney Maddock, Bar-at-Law.</b>	Judge.
<b>Maung Kin .. .. .</b>	Officiating Judge.
<b>Parlett, The Hon'ble Mr. Leonard Montague .. ..</b>	Judge. (On leave.)
<b>Young, The Hon'ble Mr. Charles Philip Radford, B.A., Bar-at-Law.</b>	Government Advocate. Officiating Judge.
<b>Saunders, Les ie Harry, I.C.S. .. .. .</b>	Judicial Commissioner, Upper Burma.
<b>Sen, Purna Chandra, Bar-at-Law .. .. .</b>	Official Assignee and Receiver, Rangoon.
<b>Christopher, S. A., Bar-at-Law .. .. .</b>	Government Prosecutor, Rangoon.
<b>Darwood, Arthur John, Bar-at Law .. .. .</b>	Government Prosecutor, Moumein.
<b>Brown, Ralph Roberts, B.A., I.C.S. .. .. .</b>	Registrar, Chief Court, Lower Burma.
<b>Millar, Edward .. .. .</b>	Registrar, Court of Judicial Commissioner, Upper Burma.

**Central Provinces, Judicial Department.**

<b>Drake Brockman, Sir H. V., M.A. LL.M., Bar-at-Law, I.C.S.</b>	Judicial Commissioner.
<b>Batten, J. K., I.C.S. .. .. .</b>	First Additional Judicial Commissioner.
<b>Stanyon, H. J., C.I.E., V.D., A.D.C., Bar-at-Law ..</b>	Second Additional Judicial Commissioner.
<b>Jackson, Robert John .. .. .</b>	Registrar.
<b>Parande, K. G. .. .. .</b>	Deputy Registrar (On leave).

**N.-W. Frontier Province Judicial Department.**

<b>Barton, W. P., C.I.E., I.C.S. .. .. .</b>	Judicial Commissioner
<b>Muhammad Akbar Khan .. .. .</b>	Registrar.

**Punjab Judicial Department.**

<b>Johnstone, The Hon'ble Sir Donald Campbell, I.C.S. ..</b>	Chief Judge.
<b>Rattigan, The Hon'ble Mr. Henry Adolphus Byden, B.A., Bar-at-Law.</b>	Judge. (On leave.)
<b>Shah Din, The Hon'ble Mian Muhammad, Bar-at-Law..</b>	Judge.
<b>Smith, The Hon'ble Mr. H. Scott, I.C.S. .. .. .</b>	Judge.
<b>Chevis, The Hon'ble Mr. William, I.C.S. .. .. .</b>	Judge.
<b>Shadi Lal, The Hon'ble Rai Bahadur, Bar-at-Law</b>	First Temporary Additional Judge.
<b>Le Rossignol, The Hon. Mr. Walter Aubin, I.C.S. ..</b>	Second Temporary Additional Judge.
<b>Gracey, S. W., B.A., I.C.S. .. .. .</b>	Legal Remembrancer.
<b>Petman, Charles Bevan, B.A., Bar-at-Law .. .. .</b>	Government Advocate.
<b>Campbell, Archibald, B.A., I.C.S. .. .. .</b>	Registrar.

**United Provinces, Judicial Department.**

<b>Richards, The Hon'ble Sir Henry George, Kt., Bar-at-Law, K.C.</b>	Chief Justice.
<b>Knox, The Hon'ble Sir George Edward, Kt., LL.D., I.C.S.</b>	Puisne Judge
<b>Banarji, The Hon'ble Sir Pramada Charan, Kt., B.A., B.L.</b>	Ditto.
<b>Piggott, The Hon'ble Mr. Theodore Caro, I.C.S. ..</b>	Ditto.
<b>Tudball, The Hon'ble Mr. William, I.C.S. .. .. .</b>	Ditto.
<b>Walsh, The Hon. Mr. Cecil, Bar-at-Law, M.A. ..</b>	Ditto.
<b>Rafiq, The Hon'ble Mr. Muhammad, Bar-at-Law ..</b>	Ditto.
<b>Murray, George Ramsay, I.C.S. .. .. .</b>	Registrar.
<b>Ashworth, The Hon'ble Mr. E. H., I.C.S. .. .. .</b>	Legal Remembrancer.
<b>Ryves, Alfred Edward, B.A., Bar-at-Law .. .. .</b>	Government Advocate.
<b>Vacant. .. .. .</b>	Law Reporter and Secretary, Legislative Council.
<b>Lalit Mohan Banarji .. .. .</b>	Government Pleader.

**COURT OF JUDICIAL COMMISSIONER OF OUDH—LUCKNOW.**

<b>Lindsay, Benjamin, I.C.S. .. .. .</b>	Judicial Commissioner.
<b>Stuart, Louis, I.C.S. .. .. .</b>	First Additional Judicial Commissioner.
<b>Rai Kanhaiya Lal, Bahadur .. .. .</b>	Second Additional Judicial Commissioner.
<b>Cordeux, C. H., Bar-at-Law .. .. .</b>	Temporary Registrar.
<b>Nagendra Nath Ghosal .. .. .</b>	Government Pleader.

NUMBER AND VALUE OF CIVIL SUITS INSTITUTED.

Administrations.	Number of Suits Instituted.						Number of Suits the value of which cannot be estimated in money.	Total Number of Suits Instituted.	Total Value of Suits.	
	Value not exceeding Rs. 10.	Value Rs. 10 to Rs. 50.	Value Rs. 50 to Rs. 100.	Value Rs. 100 to Rs. 500.	Value Rs. 500 to Rs. 1,000.	Value Rs. 1,000 to Rs. 5,000.				
Bengal	90,878	271,007	114,153	121,249	11,345	6,708	949	617,488	6,347,524	
Bihar and Orissa	34,160	73,904	29,062	33,379	4,077	3,259	152	178,788	6,510,875	
United Provinces	12,928	60,736	41,063	43,185	4,171	3,472	29	181,788	4,570,866	
Punjab	21,478	70,902	44,853	46,094	7,203	3,846	634	193,266	2,953,318	
Delhi	565	1,879	1,172	1,781	389	332	34	6,191	108,331	
North-West Frontier Province	3,861	10,702	5,919	5,676	631	486	16	27,403	287,999	
Burma	3,310	21,110	14,195	19,097	2,301	1,822	1,604	63,742	1,369,845	
Central Provinces and Berar	7,772	37,150	21,242	25,323	3,668	2,337	..	97,622	1,318,231	
Assam	4,293	19,157	8,916	9,025	475	253	123	42,488	306,726	
Almer-Merwara	1,278	3,684	1,653	1,319	139	70	..	8,452	59,890	
Coorg	209	1,356	549	390	31	19	..	2,564	18,218	
Madras	91,624	192,824	74,568	87,971	11,110	7,184	729	467,155	5,199,517	
Bombay	13,588	60,371	32,880	40,893	6,156	4,389	2,661	101,944	4,500,390	
British Baluchistan	760	1,908	660	730	99	70	72	4,306	32,663	
TOTAL, 1914	286,704	835,694	390,885	434,122	53,845	36,247	7,030	2,055,160	34,083,678	
TOTALS	1913	289,745	851,323	395,546	433,932	51,981	34,066	7,300	2,070,117	28,255,410
	1912	301,394	867,790	393,502	425,852	50,300	33,027	7,368	2,086,407	26,783,901
	1911	299,542	828,388	387,657	416,486	47,408	31,563	6,536	2,043,336	27,350,586
	1910	301,895	879,145	405,969	440,101	56,628	37,732	7,336	2,135,031	32,340,588
	1909	294,997	845,946	376,742	390,375	48,654	30,806	7,336	2,000,954	28,958,068
	1908	289,284	819,595	354,196	366,602	44,430	28,236	7,347	1,914,954	25,955,219
	1907	300,857	808,768	335,739	344,351	40,707	26,186	6,822	1,867,899	22,459,066
	1906	311,039	818,974	335,840	338,010	39,863	25,014	6,871	1,880,108	22,370,166
	1905	316,370	787,784	314,422	314,043	37,182	23,315	7,205	1,804,445	24,496,879

\* Details not given of 42 Bombay suits in 1906; 56 Madras suits in 1906, 96 in 1907, 74 in 1908, 92 in 1909, 376 in 1910, 71 in 1911, 64 in 1912, 22 in 1913, and 28 suits in 1914; 370 Bengal suits in 1909; and 49 Delhi suits in 1913 and 84 in 1914.

## THE INDIAN POLICE.

The Indian Government employ 196,304 Officers and men in the Indian Police. The total cost of maintaining the Force is Rs. 3,957,038. In large cities, the Force is concentrated and under direct European control; in the mofussil the men are scattered throughout each District and located at various Outposts and Police Stations. The smallest unit for administrative purposes is the Outpost which generally consists of 3 or 4 Constables under the control of a Head Constable. Outpost Police are maintained to patrol roads and villages and to

report all matters of local interest to their superior, the Sub-Inspector. They have no powers to investigate offences and are a survival of the period when the country was in a disturbed state and small bodies of Police were required to keep open communications and afford protection against the raids of dacoits. It is an open question whether they are now of much use. Each Outpost is under a Police Station which is controlled by an officer known as a Sub-Inspector.

**Distribution of Police.**—The area of a Police Station varies according to local conditions. The latest figures available are—

	Average area per Police Station.	Average number of Regular Civil Police per 10,000 of Population.
	Square miles.	
Bengal * .. .. .	126	4·8
Assam .. .. .	616	5·3
United Provinces .. .. .	127	7·7
Punjab .. .. .	203	10·3
North-West Frontier Province .. .. .	179	19·8
Central Provinces and Berar .. .. .	242	8·0
Burma * .. .. .	487	13·4
Madras .. .. .	144	8·0
Bombay * .. .. .	262	15·0

\* Excluding the towns of Calcutta, Bombay and Rangoon. The figures include the Railway police, but not Military police.

## Organisation of Police.

The Police Station Officer (the Sub-Inspector) is responsible for the investigation of all cognisable crimes, that is to say, all offences in which the Police can arrest without a warrant from a Magistrate, which occur within his jurisdiction; he is also held responsible for the maintenance of the public peace and the prevention of crime. From the point of view of the Indian Hyot, he is the most important Police Officer in the District and may rightly be considered the backbone of the Force.

Superior to the Sub-Inspector is the Inspector who holds charge of a Circle containing 4 or 5 Police Stations. His duties are chiefly those of supervision and inspection. He does not ordinarily interfere in the investigation of crime unless the conduct of his subordinates renders this necessary.

The Inspector is usually a selected and experienced Sub-Inspector. Each District contains 3 or 4 Circles, and in the case of large

Districts, is divided into 2 Sub-divisions—one of which is given to an Assistant Superintendent of Police, a European gazetted Officer. The Police Force in each District is controlled by a District Superintendent of Police, who is responsible to the District Magistrate (Collector or Deputy Commissioner) for the detection and prevention of crime and for the maintenance of the public peace, and, to his Deputy Inspector-General and Inspector-General, for the internal administration of his Force. Eight or ten Districts form a Range administered by a Deputy Inspector-General, an officer selected from the ranks of the Superintendents. At the head of the Police of each Province is the Inspector-General who is responsible to the Local Government for the administration of the Provincial Police.

Separate but recruited from the District Force is the Criminal Investigation Department, which is under the control of a specially selected European Officer of the rank and

standing of a Deputy Inspector-General. The Criminal Investigation Department, usually called the C. I. D., is mainly concerned with political inquiries, seditious cases and crimes with ramifications over more than one District or which are considered too important to leave in the hands of the District Police. It is a small force of Sub-Inspectors and Inspectors who have shown their ability and intelligence when working in the mofussil and forms in each Province a local Scotland Yard.

The larger Cities of Calcutta, Bombay, and Madras have their own Police Force, independent of the Inspector-General of Police, and under the control of a Commissioner and 2 or more Deputies. For Police purposes each city is divided into divisions; in Calcutta each division is in charge of a Deputy Commissioner of Police, in Bombay and Madras of a Superintendent, these officers being selected from the European ranks of the City Force. In Bombay however, the Superintendents are Gazetted Officers. Each division is sub-divided into a small number of Police Stations, the station being in charge of an Inspector assisted by Indian Sub-Inspectors and European Sergeants.

The Supreme Government at Delhi and Simla keeps in touch with the Provincial Police by means of the Director of Criminal Intelligence and his Staff. The latter do not interfere in the Local Administration and are mainly concerned with the publication of information regarding international criminals, inter-provincial crime and Political inquiries in which the Supreme Government is interested.

**Recruitment.**—The constable is enlisted locally. Certain castes are excluded from service and the formation of cliques by filling up the Force from any particular caste or locality is forbidden. In some Provinces a fixed percentage of foreigners must be enlisted. Recruits must produce certificates of good character and pass a medical test. They must be above certain standards of physical development. The constable rises by merit to the rank of Head Constable and, prior to the Police Commission, could rise to the highest Indian subordinate appointments. Since 1906, his chances of promotion have been greatly curtailed, this has certainly lowered the standard coming forward for service in the Force in the lower ranks.

The Sub Inspector, until 1906, was a selected Head Constable, but Lord Curzon's Commission laid down that Sub-Inspectors should be recruited direct from a socially better class of Indians. In most Provinces, eighty per cent of the Sub-Inspectors are selected by nomination, trained for a year or 18 months at a Central Police School, and, after examination, appointed direct to Police Stations to learn their work by actual experience. It is too early to judge this system by results, but it has no doubt great disadvantages and undetected crime in India is increasing rapidly.

An Inspector is generally a selected Sub-Inspector. Direct nomination is the exception, not the rule.

The Deputy Superintendent, a new class of officer, instituted on the recommendation of

the Commission, is an Indian gazetted officer and is the native Assistant to the District Superintendent of Police. He is either selected by special promotion from the ranks of the Inspectors or is nominated direct, after a course at the Central Police School.

Prior to 1893, the gazetted ranks of the Force were filled either by nomination or by regimental officers seconded from the Army for certain periods. In 1893, this system was abandoned and Assistant Superintendents were recruited by examination in London. On arrival in India, they were placed on probation until they had passed their examinations in the vernacular, in law, and in riding and drill. The establishment of Police Training Schools in 1906 has done much to improve the training of the Police Probationer, and selection by examination has given Government a better educated officer, but open competition does not reveal the best administrators and should be tempered, as in the Navy, by selection.

**Pay**—The monthly salaries drawn by each grade of Police Officer are as follows:—

A constable draws from	..Rs. 10 to 12
A Head Constable draws	.. ; 15 to 20
A Sub-Inspector from	.. ; 50 to 100
An Inspector from	.. ; 150 to 250
Deputy Superintendents from	.. ; 250 to 500
Assistants from	.. ; 300 to 500
District Superintendents of Police from	..Rs 700 to 1,200
Deputy Inspectors-General from	.. ..Rs. 1,500 to 1,800
Inspectors-General from	Rs. 2,000 to 3,000

The appointments of Commissioner of Police, Calcutta, Bombay, and Madras, and all Provincial Inspectors-General, may be held by a member of the Indian Civil Service, if no Police Officer is found suitable for such appointments.

**Internal Administration.**—The District Force is divided into 2 Branches—Armed and Unarmed. As the duties of the armed branch consist of guarding Treasuries, escorting treasure and prisoners and operating against dangerous gangs of dacoits, they are maintained and controlled on a military basis. They are armed and drilled and taught to shoot after military methods. The unarmed branch are called upon to collect fines magisterially inflicted, serve summonses and warrants, control traffic, destroy stray dogs, extinguish fires, enquire into accidents and non-cognizable offences. The lower grades are clothed and housed by Government without expense to the individual. The leave rules are fairly liberal, but every officer, European or Native, must serve for 30 years before he is entitled to any pension, unless he can obtain a medical certificate invaliding him from the service. This period of service in an Eastern climate is generally admitted to be too long and the efficiency of the Force would be considerably improved if Government allowed both the officers and men to retire after a shorter period of service.



## STATISTICS OF POLICE WORK.

The undesirability of attaching undue importance to statistical results as a test of the merits of police work was a point upon which considerable stress was laid by the Indian Police Commission, who referred to the evils likely to result from the prevalence among subordinate officers of an impression that the advancement of an officer would depend upon his being able to show a high ratio of convictions, both to cases and to persons arrested, and a low ratio of crime. The objection applies more particularly to the use of statistics for small areas; but they cannot properly be used as a basis of comparison even for larger areas without taking into account the differences in the conditions under which the police work; and, it may be added, they can at the best indicate only very imperfectly the degree of success with which the police carry out that important branch of their duties, which consists in the prevention of crime. These considerations have been emphasized in recent orders of the Government of India. Subject to these observations, the figures below may be given as some indication of the volume of work falling upon the police, and of the wide differences between the conditions and the statistical results in different provinces:—

Administrations.	Number of Offences reported.	Number of Persons under Trial.	Persons whose cases were disposed of				Persons remaining under Trial at the end of the Year.
			Dis-charged or Acquitted.	Con-victed.	Com-mitted or Referred	Died, Escaped or Transferred to another Province.	
Bengal .. .. .	342,660	(a) 316,671	108,532	195,312	3,008	208	0,605
Bihar and Orissa ..	114,076	113,239	54,107	53,105	1,528	120	4,379
United Provinces ..	228,354	342,390	108,582	130,523	6,225	241	6,819
Punjab .. .. .	204,803	280,778	197,800	68,878	1,755	271	12,074
North-West Frontier Province.	23,723	35,854	18,574	16,287	381	20	572
Burma .. .. .	109,370	183,386	66,301	106,522	1,878	2,746	5,939
Central Provinces and Berar.	42,180	68,379	31,433	22,853	1,712	47	2,833
Assam .. .. .	46,203	36,388	18,083	14,501	481	31	2,382
Ajmer-Merwara ..	8,053	10,376	3,040	5,856	1	30	549
Coorg .. .. .	3,124	3,799	1,981	1,424	15	10	360
Madras .. .. .	337,445	485,957	221,319	246,633	4,521	130	13,354
Bombay .. .. .	161,502	(b) 236,071	100,848	121,549	1,992	1,023	7,587
British Baluchistan ..	6,654	11,192	6,344	3,824	0	68	947
Delhi .. .. .	6,068	6,009	2,630	3,105	48	4	222
TOTAL, 1914 ..	1,634,224	2,120,472	1,031,374	902,922	23,554	4,949	67,631
1913 ..	1,058,405	62,141,362	1,051,888	987,592	22,459	4,735	74,652
1912 ..	1,059,254	62,132,813	1,053,057	977,267	21,050	4,813	75,765
1911 ..	1,502,995	61,900,679	966,783	897,786	21,173	3,906	70,832
1910 ..	1,447,732	61,884,951	922,379	872,298	21,929	4,439	61,677
1909 ..	1,421,350	61,856,219	914,500	854,667	22,174	3,849	61,502
1908 ..	1,412,817	61,814,207	897,462	860,065	24,535	3,625	58,496
1907 ..	1,411,653	1,816,827	880,706	851,097	21,296	3,505	60,223
1906 ..	1,404,777	1,805,707	864,493	860,486	22,776	3,011	54,041
1905 ..	1,385,344	1,767,131	823,185	862,398	21,293	6,429	53,825

(a) Includes 3 persons remanded for retrial

(b) " 25 " ( 9 on dormant file, 16 handed over to Military Authorities) in 1914.

" 30 " ( 13 " 17 " " to Military Authorities) in 1913.

" 119 " ( 139 " 9 " " " and 1 sent to Naval Authorities) in 1912.

" 206 " ( 171 " 35 " " to Military Authorities) in 1911.

" 128 " ( 117 " 11 " " to Military Authorities) in 1910.

" 26 " ( 10 " 14 " " " and 2 referred under Section 307, Criminal Procedure Code) in 1909.

(c) Excludes 4 persons whose cases are pending by reason of their being insane.

## PRINCIPAL POLICE OFFENCES.

## CASES.

Administrations.	Offences against the State and Public Tranquility.		Murder.		Other serious Offences against the Person.		Dacoity.		Cattle Theft.		Ordinary Theft.		House-trespass and Housebreaking with intent to commit Offence.	
	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.
Bengal .. .. .	2,251	940	490	79	6,121	1,481	356	36	1,326	544	24,261	4,655	38,741	2,565
Calcutta .. .. .	111	53	18	3	743	189	1		44	41	4,631	1,441	1,232	298
Suburbs .. .. .	999	387	249	51	3,071	741	138	18	1,343	431	17,530	3,665	20,905	1,457
Bihar and Orissa .. .. .	1,538	746	836	310	9,376	2,066	837	171	6,330	1,502	42,656	6,842	76,869	4,811
United Provinces .. .. .	1,618	507	609	242	6,947	2,079	142	41	3,827	956	10,456	2,752	22,261	2,425
Punjab .. .. .	24	6	12	3	128	24	2	1	28	11	678	208	426	77
Delhi .. .. .	157	87	285	167	1,247	532	82	19	138	50	*895	*319	1,819	338
N.-West Frontier Pro .. .. .	66	361	574	151	10,464	3,042	210	50	4,724	1,438	14,410	4,960	8,691	2,769
Burma .. .. .	47	14	19	5	271	80	8	1	972	505	972	505	1,128	70
Central Provinces and Berar .. .. .	536	250	252	98	2,198	792	53	11	1,393	496	19,086	1,862	10,922	1,199
Assam .. .. .	728	290	67	26	1,325	337	16	7	360	106	4,729	892	5,742	658
Cooch .. .. .	3	4	9	6	51	21	6	5	16	2	169	73	25	5
Madras .. .. .	1,756	691	773	167	5,763	1,506	730	68	4,626	1,343	22,101	5,128	18,204	2,432
Bombay .. .. .	1,229	366	407	170	4,025	1,202	186	29	3,174	1,006	11,261	4,019	9,617	1,843
Bombay Town & Island .. .. .	44	32	24	6	592	282	1				5,036	2,543	1,235	349
TOTAL, 1914 .. .. .	11,706	4,740	4,624	1,484	52,522	15,324	2,770	457	27,329	7,926	178,824	39,664	216,817	21,296
1913 .. .. .	12,172	4,798	4,471	1,397	52,948	15,458	2,494	397	27,201	7,495	*174,727	*37,685	205,860	20,014
1912 .. .. .	12,414	4,716	4,430	1,308	52,337	14,763	2,512	413	27,254	7,171	176,061	38,356	199,480	20,178
1911 .. .. .	11,873	4,456	4,163	1,281	49,308	14,123	2,454	369	25,952	6,789	166,304	37,501	205,274	20,065
1910 .. .. .	11,700	4,599	4,031	1,092	47,750	13,749	2,150	367	27,237	7,200	159,280	37,279	199,604	19,784
TOTALS .. .. .	11,919	4,914	3,885	1,143	44,960	12,947	2,524	453	27,833	7,710	169,451	40,372	207,283	21,296
1908 .. .. .	12,411	4,797	4,014	1,203	43,838	12,678	2,984	659	29,456	8,927	194,246	48,448	236,280	24,972
1907 .. .. .	12,181	4,454	3,603	1,106	42,921	12,452	2,799	428	27,809	7,492	178,898	41,173	212,209	21,679
1906 .. .. .	12,386	4,490	3,555	1,090	42,993	12,452	2,085	419	27,577	7,431	184,915	45,112	203,701	22,554
1905 .. .. .	12,313	4,456	3,386	1,048	43,828	12,920	2,276	434	25,847	7,038	174,061	40,401	194,232	21,760

\* Including some cases of cattle theft.

## JAILS.

Jail administration in India is regulated generally by the Prisons Act of 1894, and by rules issued under it by the Government of India and the local governments. The punishments authorised by the Indian Penal Code for convicted offenders include transportation, penal servitude, rigorous imprisonment (which may include short periods of solitary confinement), and simple imprisonment. Accommodation has also to be provided in the jails for civil and under-trial prisoners.

The origin of all jail improvements in India in recent years was the Jail Commission of 1889. The report of the Commission, which consisted of only two members, both officials serving under the Government of India, is extremely long, and reviews the whole question of jail organization and administration in the minutest detail. In most matters the Commission's recommendations have been accepted and adopted by Local Governments, but in various matters, mainly of a minor character, their proposals have either been rejected *ab initio* as unsuited to local conditions, abandoned as unworkable after careful experiment or accepted in principle but postponed for the present as impossible.

The most important of all the recommendations of the Commission, the one that might in fact be described as the corner stone of their report, is that there should be in each Presidency three classes of jails: in the first place, large central jails for convicts sentenced to more than one year's imprisonment; secondly, district jails, at the head-quarters of districts; and, thirdly, subsidiary jails and "lock-ups" for under-trial prisoners and convicts sentenced to short terms of imprisonment. The jail department in each province is under the control of an Inspector-General; he is generally an officer of the Indian Medical Service with jail experience, and the Superintendents of certain jails are usually recruited from the same service. The district jail is under the charge of the civil surgeon, and is frequently inspected by the district magistrate. The staff under the Superintendent includes, in large central jails, a Deputy Superintendent to supervise the jail manufactures, and in all central and district jails one or more subordinate medical officers. The executive staff consists of jailors and warders, and convict petty officers are employed in all central and district jails, the prospect of promotion to one of these posts being a strong inducement to good behaviour. A Press Note issued by the Bombay Government in October, 1915, says:—"The cadre and emoluments of all ranks from Warder to Superintendent have been repeatedly revised and altered in recent years. But the Department is not at all attractive in its lower grades. The two weak spots in the jail administration at the moment are the insufficiency of Central Prisons and the difficulty of obtaining good and sufficient warders.

**Employment of Prisoners.**—The work on which convicts are employed is mostly carried on within the jail walls, but extra-mural employment on a large scale is sometimes allowed, as, for example, when a

number of convicts were employed in excavating the Jhelum Canal in the Punjab. Within the walls prisoners are employed on jail service and repairs, and in workshops. The main principle laid down with regard to jail manufactures is that the work must be penal and industrial. The industries are on a large scale, multifarious employment being condemned, while care is taken that the jail shall not compete with local traders. As far as possible industries are adapted to the requirements of the consuming public departments, and printing, tent-making, and the manufacture of clothing are among the commonest employments. Schooling is confined to juveniles; the experiment of teaching adults has been tried, but literary instruction is unsuitable for the class of persons who fill an Indian jail.

The conduct of convicts in jail is generally good, and the number of desperate characters among them is small. Failure to perform the allotted task is by far the most common offence. In a large majority of cases the punishment inflicted is one of those classed as "minor." Among the "major" punishments fetters take the first place. Corporal punishment is inflicted in relatively few cases, and the number is steadily falling. Punishments were revised as the result of the Commission of 1889. Two notable punishments then abolished were shaving the heads of female prisoners and the stocks. The latter, which was apparently much practised in Bombay, was described by the Commission as inflicting exquisite torture. Punishments are now scheduled and graded into major and minor. The most difficult of all jail problems is the internal maintenance of order among the prisoners, for which purpose paid warders and convict warders are employed. With this is bound up the question of a special class of well-behaved prisoners which was tried from 1905 onwards in the Thana Jail.

**Juvenile Prisoners.**—As regards "youthful offenders"—i.e., those below the age of 15—the law provides alternatives to imprisonment, and it is strictly enjoined that boys shall not be sent to jail when they can be dealt with otherwise. The alternatives are detention in a reformatory school for a period of from three to seven years, but not beyond the age of 18; discharge after admonition; delivery to the parent or guardian on the latter executing a bond to be responsible for the good behaviour of the culprit; and whipping by way of school discipline.

The question of the treatment of "young adult" prisoners has in recent years received much attention. Under the Prisons Act, prisoners below the age of 18 must be kept separate from older prisoners, but the recognition of the principle that an ordinary jail is not a fitting place for adolescents (other than youthful habitués) who are over 15, and therefore ineligible for admission to the reformatory school, has led Local Governments to consider schemes for going beyond this by treating young adults on the lines followed at Borstal, and considerable progress has been made in this direction. In 1905, a special class for selected juveniles and young adults was established at the Dharwa-

jail in Bombay; in 1908 a special juvenile jail was opened at Alipore in Bengal; in 1909 the Meiktila jail in Burma and the Tanjore jail in Madras were set aside for adolescents, and a new jail for juvenile and "juvenile adult" convicts was opened at Bareilly in the United Provinces; and in 1910 it was decided to concentrate adolescents in the Punjab at the Lahore District jail, which is now worked on Borstal lines. Other measures had previously been taken in some cases; a special reformatory system for "juvenile adults" had, for example, been in force in two central jails in the Punjab since the early years of the decade, and "Borstal enclosures" had been established in some jails in Bengal. But the public is slow to appreciate that it has a duty towards prisoners, and but little progress has been made in the formation of Prisoners' Aid Societies except by the Salvation Army.

**Reformatory Schools.**—These schools have been administered since 1899 by the Education department, and the authorities are directed to improve the industrial education of the inmates, to help the boys to obtain employment on leaving school, and as far as possible to keep a watch on their careers.

**Transportation.**—Transportation is an old punishment of the British Indian criminal law, and a number of places were formerly appointed for the reception of Indian transported convicts. The only penal settlement at the present time is Port Blair in the Andaman Islands. Under existing rules convicts sentenced to transportation for life, or for a term of years of which six have still to run, may be transported to the Andamans, subject to their being physically fit, and to some other conditions in the case of women. The sanctioned scheme contemplates five stages in the life of a male transported convict, the first six months being passed in a cellular jail, the next eighteen months in association in a jail similar to those of the Indian mainland, and the following three years as a convict of the third class kept to hard gang

labour by day and confined in barracks by night. Having thus completed five years, a convict may be promoted to the second class, in which he is eligible for employment in the various branches of the Government services or in the capacity of servants to a private resident. After five years so spent, a well-behaved convict enters the first class, in which he labours under more favourable conditions, or is granted a ticket enabling him to support himself, with a plot of land. He may now send for his family or marry a female convict. The three later stages of this discipline have been in force for many years, and the first for some time, the cellular jail having been finished in 1905; but the associated jail for the second stage has not yet been built. Females are kept at intramural work under strict jail discipline for three years; for the next two years they are subjected to a lighter discipline, and at the end of five years they may support themselves or marry. Promotion from class to class depends on good conduct. The convicts are employed in jail service, in the erection and repair of jail buildings, in the commissariat, medical, marine, and forest departments, in tea-gardens and at other agricultural work, and in various jail manufactures. Ordinary male convicts sentenced to transportation for life are released, if they have behaved well, after twenty years, and persons convicted of dacoity and other organised crime after twenty-five. *Thugs* and professional prisoners are never released. Well-behaved female convicts are released after fifteen years. The release is sometimes absolute and sometimes, especially in the case of dacoits, subject to conditions, e.g., in regard to residence. In some cases released convicts prefer to remain in the settlement as free persons. The settlement is administered by a superintendent, aided by a staff of European assistants and Indian subordinates. The convict population of Port Blair amounted in 1914 to 11,927, consisting of 11,349 males and 578 females. The total population of the settlement was 16,609.

**The variations of the jail population in British India during five years are shown in the following table:—**

	1915.	1914.	1913.	1912.	1911.
Jail population of all classes on 1st January .. .. .	112,015	105,555	101,008	91,876	102,991
Admissions during the year .. .. .	568,280	516,098	492,308	492,820	470,513
Aggregate .. .. .	680,295	621,653	594,216	584,696	573,504
Discharged during the year from all causes .. .. .	558,008	509,638	488,677	482,786	481,622
Jail population on 31st December .. .. .	122,287	112,015	105,539	101,910	91,882
Convict population on 1st January .. .. .	98,963	92,913	89,287	70,668	91,505
Admissions during the year .. .. .	180,466	168,723	160,851	159,424	152,396
Aggregate .. .. .	279,429	261,636	250,138	239,092	243,901
Released during the year .. .. .	163,508	159,468	154,494	147,292	151,936
Transported beyond seas .. .. .	1,486	1,319	1,566	1,382	1,188
Casualties, &c. .. .. .	2,616	2,429	2,053	2,084	2,222
Convict population on 31st December .. .. .	107,811	96,968	92,913	89,287	79,668

The daily average number of prisoners, which had steadily decreased since 1908, rose slightly in 1913 to nearly the figure of 1911. The fall in 1912 was, however, largely attributable to the release of convicts and civil prisoners on the occasion of the Delhi Durbar. The increase in 1913 was distributed among all provinces except the United Provinces of Agra and Oudh and Coorg, in which the figures continued to show decreases.

More than one-half of the total number of convicts received in jails during the year came from the classes engaged in agriculture and cattle tending, over 152,000 out of 181,000 are returned as illiterate.

The percentage of previously convicted prisoners was 19·67 as against 19·82 in 1914 while the number of youthful offenders fell from 505 to 418. The following table shows the **nature and length of sentences** of convicts admitted to jails in 1912 to 1915.—

Nature and Length of Sentence.	1915.	1914.
Not exceeding one month .. .. .	45,065	43,685
Above one month and not exceeding six months .. ..	69,299	66,113
„ six months „ „ one year .. .. .	34,747	31,284
„ one year „ „ five years .. .. .	24,755	21,989
„ five years „ „ ten „ .. .. .	2,984	2,619
Exceeding ten years .. .. .	242	250
Transportation beyond seas —		
(a) for life .. .. .	1,309	1,308
(b) for a term .. .. .	1,189	720
Sentenced to death .. .. .	828	831

The total daily average population for 1914 was 95,260; the total offences dealt with by criminal courts was 192, and by Superintendents 170,277. The corresponding figures for 1913 were 90,282,176 and 180,369 respectively.

The total number of corporal punishments again showed a decrease, viz., from 361 to 352. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 7,594 as compared with 7,568 in the preceding year.

Total expenditure rose from £571,304 to £618,588, and total cash earnings increased from £97,819 to £109,845; there was, consequently, an increase of £35,198 in the net cost to Government.

The death rate increased from 15·32 per mille in 1913 to 17·98 in 1914. The admissions to hospital were somewhat higher, and the daily average number of sick rose slightly. The chief causes of death were tubercle of the lungs, dysentery and pneumonia.

## Executive and Judicial Functions.

Throughout the history of political agitation in India, few matters have received more consistent attention than the question of the separation of the Judicial and the Executive functions. It has been one of the principal planks in the political platform of the National Congress since its inception in 1885, and has received the support of men of every shade of political opinion, from the most violent Extremist to the most conciliatory Moderate.

The question arises from the fact that the Indian Administration is based on the Oriental view that all power should be concentrated in the hands of a single official. Thus the District Magistrate is the chief revenue authority in the District, he controls local boards and municipalities, and directs the District Police, and, in fine, almost every department within the District is to a large extent under his influence. Sessions trials and Civil Justice fall within the province of the District Judge, but there remains under the District Magistrate's orders a body of subordinate Magistrates who dispose of simple criminal cases, and commit graver ones to the Sessions.

The opponents of the existing system are apt to rely largely on *ad capitandum* phrases, like "the maintenance of judicial independence," and "a violation of the first principles of equity," rather than to specify exactly what points they really consider objectionable. It appears, however, that there are two main items in the District Magistrate's position to which exception is taken: one is that he is executive head of the District with direct control of the police, has the power of trying cases; the other is that the subordinate Magistrates, who try the great majority of cases, are directly under him, receive his orders, and rely on his good opinion for their promotion.

As regards the first point, the number of cases actually tried by the District Magistrate is exceedingly small. Sir Charles Elliott defending the existing system in 1896, said:—"There are many Districts in Bengal in which he does not try 12 cases a year." Since 1896 miscellaneous work has increased so much that even this small number has been greatly reduced. In fact, in Bombay to-day the majority of District Magistrates probably go through the year without trying a single case, and the difference would hardly be noticeable if the District Magistrate altogether lost his powers to try cases. The power is, however, sufficiently useful on occasions to outweigh the fear of harm arising from any abuse of that power on the rare occasions when it is used.

The more important item of the District Magistrate's power, that of control over his subordinate Magistrates, is attacked on the ground that he interferes with their "judicial independence." It is here assumed that control and interference are one and the same thing. If the District Magistrate said to his subordinate, "I consider this man guilty, and I expect you to convict him," there would be very real cause for complaint. But interference of this type does not occur, and is not alleged. It has been said that inspection is to the District Officer the very breath of his nostrils, and it is very largely to his continual inquisitiveness into the work of his subordinates,

that the relatively high standard of justice attained by the subordinate magistracy in India is due. The points towards which his inquiries are most frequently directed are matters like want of sense of proportion in sentences; delays and irregularities in procedure; subservience to the interests of a local bar; prolixity in judgments and so forth. If control of the Magistracy were exercised only by the District Judge, who is practically tied to his bench, this supervision would be impossible, and the only check on the subordinate Magistrates would be occasional strictures passed by the Judge in appeal or on revision.

The opponents of the existing system would substitute for the present Magistracy trained lawyers, whose sole work would be that of stipendiary magistrates. There is no reason to suppose that the trained lawyer would be any less liable to the faults mentioned above. Nor is the Magistrate of to-day altogether untrained. The criminal law of India is to a very large extent independent of customary and case law, and is based on comparatively simple codes. Every official Magistrate is examined in these codes, and with a few years' experience, he is often a match in argument for all but the best of the local *vaksils*. It is not, therefore, apparent that any gain would result from this change, while the increased charge to the public revenues would be enormous.

In 1899, the movement against the existing system culminated in a "memorial on the proposed separation of the Judicial and Executive duties in India," addressed to the Secretary of State, and signed by ten Indian gentlemen—mostly high judicial authorities. This memorial sets forth eight objections to the existing system, and it may perhaps be instructive to examine these seriatim, and to indicate with respect to each point the grounds on which an apology for the present system may be based:—

(1) "That the combination of judicial with executive duties in the same officer violates the first principles of equity."

If the same officer actually brought an offender to justice, and then tried him personally, the above theoretical objection might have considerable weight. In practice, however, as has been shown above, this does not occur; and the combination of functions in the District Officer is governed in such a way by criminal codes that the interests of accused persons are effectually safeguarded.

(2) "That while a judicial authority ought to be thoroughly impartial, and approach the consideration of any case without previous knowledge of the facts, an Executive Officer does not adequately discharge his duties, unless his ears are open to all reports and information which he can in any degree employ for the benefit of the District."

In reply to this it may be repeated that the District Magistrate, in fact, tries very few cases at all and it may be noted, moreover, that the law very largely restricts the possibility of a magistrate trying a case of which he has any previous knowledge. Further, it is surely to the public advantage that the police should be controlled by the District Magistrate, whose sole aim is or should be justice.

rather than by a police officer whose professional zeal might weigh hardly on the innocent suspect, and whose *esprit de corps* might shield a corrupt or unscrupulous subordinate from justice.

(8) "That Executive Officers in India, being responsible for a large amount of miscellaneous business, have not time satisfactorily to dispose of judicial work in addition."

By this it is presumably meant that the Executive Officer is at present overworked.

This is quite possible, but the remedy would appear to lie rather in an increase of staff than in a re-distribution of functions, which in itself could not remedy the defect.

(4) "That, being keenly interested in carrying out particular measures, they are apt to be brought more or less into conflict with individuals, and therefore that it is inexpedient that they should also be invested with judicial powers."

It is implied here that the District Officer may use his judicial powers to enforce the executive measures in which he is interested. It is not unknown for a District Magistrate to issue orders to subordinates enjoining severe sentences in particular classes of cases and this may have reference to a particular executive policy (e.g., such orders might be issued with regard to smuggling cases in a District where the illicit traffic in cocaine was rife). But it by no means follows that any injustice will result from such a line of action. Moreover, if this kind of "interference" by the District Magistrate were stopped, the only alternative left to Government, in cases where they wished specially to repress a particular type of crime, would be to amend the criminal codes by raising the minimum penalty for the offence, thereby depriving Magistrates of all discretion in the matter.

(5) "That under the existing system Collector-Magistrates do, in fact, neglect judicial for executive work."

It is not at first sight obvious how this can be urged as an objection to the fact that they do both types of work. It is true, as already stated, that the District Magistrate tries very few original cases, but it by no means follows that what judicial work he does, is done negligently.

(6) "That appeals from revenue assessments are apt to be futile when they are heard by Revenue Officers."

It is insinuated that all revenue matters should be decided by the operation of the weighty and complicated machinery of the Civil Courts. The idea of such a system in India, where three-quarters of the population are dependent on revenue-paying land, conjures up such a nightmare of confusion, that the imagination positively reels. The cost would be colossal. Nor is the objection really relevant. The Revenue Officer when hearing appeals from executive acts of his subordinates, is still an Executive and not a Judicial Officer, and what is here aimed at is a revision of the scheme of matters, which the law allows to be dealt with executively, rather than a separation of the two functions.

(7) "That great inconvenience, expense and sufferings are imposed upon suitors required to follow the camp of a Judicial Officer, who, in the discharge of his executive duties, is making a tour of his District."

This is perhaps one of the least convincing

objections advanced against the existing system. In the first place a Magistrate in headquarters is likely to be at least as far from the homes of suitors, as he is in camp. The careful Magistrate, moreover, will arrange the hearing of cases at places which suit the convenience of parties as far as possible, and considerable trouble and expense are often saved to parties in this way. If all judicial work were done by Magistrates who had no other work, the number of Magistrates would be much reduced, and it is obvious that three resident Magistrates in a District must be much less accessible than a dozen or more who are continually moving about among the agricultural population. The only people who really are inconvenienced by the touring of a Magistrate are the pleaders.

(8) "That the existing system not only involves all whom it concerns in hardships and inconvenience, but also by associating the judicial tribunal with the work of the Police and of detectives, and by diminishing the safeguards afforded by the rules of evidence, produces actual miscarriages of justice and creates, though justice be done, opportunities of suspicion, distrust and discontent which are greatly to be deplored."

It is difficult to answer so general and indefinite an objection as this, except by flat denial.

It may, however, be said that if miscarriages of justice, due to this cause, were at all frequent they could never long remain hid, and much more would be heard of them than is actually the case. In 1896, Mr. Manomohan Ghose, a Bengal lawyer of repute, drew up a memorandum containing an account of 20 cases, which had come to his notice in the course of a long experience at the bar, and in which he alleged that injustice had resulted from the union in one officer of the judicial and executive functions. These instances were discussed by Sir Charles Elliott, formerly Lieutenant-Governor of Bengal, in an article in the *Asiatic Quarterly Review* for October 1896, and his analysis robs this evidence of nearly the whole of its weight.

These then are the main objections which have been raised against the existing system. It may well be asked why, if these objections are groundless, has there been such unanimity in the opinions expressed by reformers. There are perhaps two reasons which are mainly responsible. Firstly, it is beyond question that the proposed separation would everywhere weaken the Collector's position, and thereby that of the British Raj; and secondly, those who desire the separation belong almost without exception to the class from which lawyers are most largely recruited. The separation would not merely provide innumerable stipendiary billets, holders of which would have to be recruited from among the lawyers, but an immense increase of litigation would also result.

There is no doubt that over the greater part of India, the common people place a very real confidence in the Magistracy, and this confidence is largely based on the wise and effective control exercised by District Magistrates over their subordinates. Nor is there any doubt that the common people would view with the most intense alarm any proposal which would render the magistracy independent of this control.

# The Laws of 1916.

BY

RATANLAL AND DHIRAJLAL.

(Editors of the Bombay Law Reporter.)

During the year the Indian Legislature has turned out work deficient in quantity and poor in quality. In accordance with the pledge held out at the out-break of the War, any measure of a controversial nature was kept out of sight; and but for one Act passed on the initiative of a non-official member the out-turn would have been dull indeed.

**The Indian Trusts (Amendment) Act.**—The first Act of the year was passed to amend the Indian Trusts Act (II of 1882). The amendments have been suggested by the English Trustee Act of 1893 (56 & 57 Vic. C. 53). Section 20 of the Indian Trusts Act, 1882, has been amended in two ways. First, it is provided that a trustee shall not, after the 15th of February 1916, invest the trust money in any "annuity being a terminable annuity unless a sinking fund has been established in connection with such annuity." The effect of the amendment is that trust-funds cannot in future be invested in annuities created on the purchase of certain Indian Railways. Secondly, a new clause has been added to the Section permitting investment of trust-funds in India sterling stock issued by the Secretary of State for India in Council under the authority of an Act of Parliament and charged on the revenues of India. Further, the scope of the section has been expanded in another direction. Hitherto, the section permitted investment of trust-funds in securities of those concerns, the interest of which is guaranteed by the Secretary of State for India in Council. The permission is now extended to securities sanctioned by the Government of India, e.g., a branch line railway guaranteed by the Government of India. Section 20A is added newly to the Act to enable trustees to purchase redeemable stock at a premium.

**The Defence of India (Amendment) Act.**—The provisions of the Defence of India Ordinance (III of 1915) are here enacted into clauses (m) to (r) of section 2 of the Defence of India (Criminal Law Amendment) Act, 1915. These clauses empower the Governor-General in Council (1) to place at his disposal the output of any factory, workshop, mine or other industrial concern for the manufacture of any article which is liable to be utilised in the prosecution of the present war; or (2) to take possession of or use any such factory, etc., or (3) to require any work in any such factory, etc., to be done in accordance with the directions of Government. The Governor-General in Council is further empowered to regulate the sailings of British Steamers from any port in British India and to reserve all or any accommodation of whatever kind for the carriage of persons, animals or goods on any such steamers. The powers thus assumed are very wide, but they are justified by the exigencies of the times.

**The Foreigners (Trial by Court-Martial) Act.**—Like all emergency legislation this Act is timed to remain in force during the continuance of the present War and for a period of six months

thereafter. It applies to any foreigner, who has been defined as "any person who is not a British subject." The Governor-General in Council can by a written order direct that a foreigner accused of anything which is an offence under the Defence of India Rules shall be tried—not by the ordinary Court of Law, but—by a Court Martial; and punished under the same rules. The trial is to be carried out in accordance with the provisions of the Army Act. The Act re-enacts the provisions of the Foreigners (Trial by Court-Martial) Ordinance (III of 1916), which are repealed.

**The Indian Tariff (Amendment) Act.**—Simultaneously with the publication of the Financial Statement of the Government of India in March last, the Hon'ble member in charge of the Finance Department proposed two measures to obtain increased revenue (1) from customs duties; and (2) by increased income tax. As regards the first, the general tariff rate on imported articles has been raised from 5 to 7½ per cent. Certain descriptions of iron and steel enjoyed the privileged rate of one per cent.; it is enhanced to 2½ per cent. Import duties have been put on a number of articles which were free of duty. A marked increase has been made in the case of arms and ammunition, by raising it from 10 per cent. to 20 per cent. Similarly the duty on ale, beer, porter and cider has been raised from 3 annas per gallon to 4½ annas per gallon. The quantitative rate on cigars and cigarettes yields a uniform rate of 50 per cent. The act levies export duties also. Raw Jute is taxed at rates varying from two annas to Rs. 2-4-0 per bale of 400 lbs., and jute manufactures, when not in actual use as coverings, receptacles, or bindings for other goods, are charged with the duty of Rs. 10 or Rs. 16 per ton of 2,240 lbs. according as the manufactures are sacking or Hessians. The export of rice is taxed at Rs. 0-3-0 per maund of 82½ lbs. whilst a general duty of Rs. 1-8-0 has been imposed on the export of every 100 lbs. of tea.

**The Indian Income tax (Amendment) Act.**—The second source of the increase of revenue is to advance the rate of the income-tax. The Act introduces a graduated scale of taxation. Incomes below Rs. 5,000 are left entirely untouched. Incomes above Rs. 5,000 and less than Rs. 10,000 are amenable to a tax of six pies in the rupee; those above Rs. 10,000 but less than Rs. 25,000 are taxed at the rate of nine pies in the rupee; whilst a general rate of one anna in the rupee has been fixed in the case of incomes amounting to Rs. 25,000 or more. The rate of one anna has also been fixed for the taxable profits of companies exceeding Rs. 1,000; and for interest on securities. In both cases, however, individual shareholders or holders of securities are entitled to an abatement on the tax paid or complete exemption according as their total income of all kinds falls below one of the limits provided for in the above scale.



**The Indian Ports (Amendment) Act.**—The main purpose for which the bill was introduced was to enable the Local Government to exempt fishing vessels from payment of port dues, with a view to afford every facility to the development of that rising industry. This object has been attained by amending section 34 of the Indian Ports Act (XV of 1908). The occasion thus furnished for amending the Act was utilised in carrying out other minor amendments in the Act. Section 6 has been amended so as to give Local Governments power to frame rules for the control and working of Government piers, jetties, landing places, wharves, quays, warehouses and sheds. Those Governments have also been authorised, by an addition to clause (k) to section 6, to frame rules providing for punishment to refractory boatmen, to revoke the licenses granted to boatmen, to levy fees, to fix the rates of hire and to fix the number of crews to be carried by boats plying for hire. A new sub-section has been added to section 31 providing that the owner or master of a vessel required by law to have a pilot, etc., on board shall be answerable for any loss or damage caused by the vessel or by any fault of the navigation of the vessel, in the same manner as he would have been if he had not been so required. This amendment carries out the article abolishing the defence of compulsory pilotage which was agreed to at the International Maritime Convention and which was given effect to in England by enactment of section 15 of the Pilotage Act of 1913. Two new sections have been added, Sections 68A and 68B; they require the authorities exercising jurisdiction in ports to co-operate with the military authorities in manœuvres for defence of the port either in times of peace or war.

**The Indian Medical Degrees Act.**—The passage of the bill of this Act through the Legislative Council was marked by much controversy. The act is designed to prevent any person or body of persons from granting medical degrees showing proficiency in Western Medical Science. The term "western medical science" is defined to mean "the western methods of allopathic medicine, obstetrics and surgery, but does not include the Homœopathic or Ayurvedic or Unani system of medicine." The provisions of the Act do not touch the practice of the Homœopathic system of medicine; and they leave entirely unaffected *valdyas*, *kabirajs* and *bakims*. The object of the Act seems to be to prohibit the display of bogus American medical degrees which was once epidemic in the chief towns in this country and which were procurable on easy terms of payment by anybody and everybody. Accordingly, the right to confer medical degrees qualifying practice in medical science is confined to every University established by an Act of the Governor General in Council; the state of medical faculty in Bengal; the College of Physicians and Surgeons of Bombay and the Board of Examiners, Medical College, Madras. Any person contravening the above provision is liable to pay a fine extending to ten thousand rupees; or if the offender is an association, every member of the association can be penalised in a sum of five hundred rupees. The penalty for falsely assuming or using medical titles is a fine of Rs. 250 for the first offence; and a fine which may

extend to five hundred rupees for every subsequent offence. These offences, made punishable by the Act, can be taken cognisance of only by a Presidency Magistrate or a Magistrate of the first class; and only upon a complaint made by order of the Local Government, or by a Council of Medical Registration with the previous sanction of Local Government.

**The Presidency Banks (Amendment) Act**—The enactment of the Indian Trusts (Amendment) Act of 1916 brought to view an existing defect in the Presidency Banks Act of 1876. The amending Act enables the Presidency Banks to transact business in India Sterling Stock issued by the Secretary of State for India in Council and charged on the revenues of India. It was found that there were dealings in those securities, though there was no express authorisation for it in the Act. This defect has been sought to be remedied here; and the past transactions of the Banks in the mentioned securities have been validated.

**The Indian Paper Currency Temporary (Amendment) Act.**—This Act replaces the Indian Paper Currency (Amendment) Ordinance I of 1916. It is to remain in force during the continuance of the present War and for a period of six months thereafter. By the India Paper Currency (Temporary Amendment) Act V of 1915, the maximum investment of Rs. 14 crores in paper currency authorised by Section 22 of the Paper Currency Act (11 of 1910) was raised to Rs. 20 crores; but the proviso to the Section, which provided that "the value at such price as aforesaid of such of the said securities as are not securities of the Government of India shall at no time exceed forty millions of rupees," was left untouched. The maximum limit of 40 millions is now raised to one hundred millions. It has further been enacted that the Governor-General in Council may direct that currency notes shall be issued for an additional amount not exceeding at any time sixty millions of rupees, against Treasury Bills equivalent in value thereto and held by the Secretary of State for India in Council as a reserve to secure the payment of such notes. As is well known those bills are issued for a period of twelve months; they have a peculiar suitability as a temporary substitute for gold on account of their steadiness of value and the readiness with which they can be realised. Section 4 of the Act gives power to include securities created by the Government of India in reserve provided by the Paper Currency Act, 1910.

**The Enemy Trading Act.**—As emergency legislation born of the present War, this Act is timed to remain in existence during the continuance of the War and for a period of six months thereafter. It is on the lines of the Enemy Trading Ordinance (V of 1916); and is largely based on the English Trading with the Enemy (Amendment) Act, 1914. The Act differs from its English prototype in several respects. First, the payments to the Custodian appointed under the Act are optional, and not obligatory as under the English Act. Secondly, the application of the English Act is restricted to payments in the nature of dividends, interests or profits, while the provisions of the present Act apply also *proprio vigore* to such payments only so far as debts due to

enemies are concerned. The scheme of the Act is that it starts with the appointment of Inspectors whose sole business it is to find out whether any business was or is carried on by a hostile firm (Section 3). The Governor-General in Council may then make an order (1) either prohibiting any hostile firm from carrying on business; or (2) requiring the business of such firm to be wound up (Section 4). The winding up order is given the same effect as the winding up order made by a Court under the provisions of the Indian Companies Act, 1913 (Section 5). If the hostile firm has made contracts or transfer which are found to be against public interest the Governor-General in Council has the power to cancel it (Section 6). The same authority is also given the power to vest the property of a hostile firm or hostile foreigner in a Custodian appointed under the Enemy Trading Act, 1915 (Section 7). Special provision has been made enabling the Custodian to obtain registration of transfer of shares, stocks or securities vested in him, even in the absence of shares certificates (Section 9).

**The Import and Export of Goods Act.**—Under this Act the Governor-General in Council can prohibit or restrict in any way the import or export of all or any goods from or to any country or place, or from or to any person or class of persons. It is constructed on the basis of the Import and Export of Goods Ordinance (IV of 1910) which it repeals. It is a temporary measure called into existence owing to the present war conditions. The reason for enacting it was thus expressed in the Council—"As it is well known, there are a number of traders in neutral countries which are either enemy subjects, or are at any rate working in enemy interests. It is these persons—persons on what we call the commercial black list—that we have primarily in view. . . . The Collectors of Customs. . . . have been empowered to issue licences permitting articles to go to certain destinations under certain conditions, and they are thus able to take bonds in cases where arrangements for the proper supervision of the disposal of consignments in neutral countries have not been completed or where the necessary information about consignments is lacking and exporters are anxious to send any goods in a hurry."

**The Indian Lunacy (Amendment) Act.**—The French Government having desired to obtain facilities of sending lunatics from their possessions in India to the lunatic asylums kept in British India, this Act has been passed as a matter of international comity. It adds a new Section (11A) to the Indian Lunacy Act (IV of 1912), providing—"When an arrangement has been made with any foreign European State with respect to the reception of lunatics in asylums in British India, the Governor-General in Council may direct that reception orders may be made under this Act in the case of any lunatic or class of lunatics residing in the territories in India of such foreign European State." The Act does not of course recognise the findings of foreign Courts in lunacy proceedings, but permits proceedings for a reception order in such a case by authorities in British India. The provisions of the Act do

not apply to criminal lunatics. It is to be hoped that this privilege will be extended also to Native States of India at no distant date.

**The Amending Act.**—This is a purely formal measure, making amendments of minor importance of no interest to a general reader.

**The Indian Bills of Exchange Act.**—To protect the Exchange Banks in India from loss on Bills of Exchange arising out of the position created by the War, this Act has been passed. The loss may arise from two causes:—(1) delay in presentment of a bill for payment; and (2) loss of the bill. In the first case the Act provides that where the proper place for payment is outside British India, the delay is excused if it is due to circumstances arising out of the present War or to the impracticability of transmitting the bill to the place of payment with reasonable safety. Secondly, where a bill of exchange is lost through circumstances arising out of the present War, and a suit is brought on such bill the Court may allow proof of the bill to be given by means of a copy thereof certified by a Notary Public or in any other way. The difficulties which the Act proposes to redress are that before the outbreak of War the Exchange Banks had become holders of a large number of bills of exchange drawn in India and made payable at sight or at a specified period after date in countries which had since become enemy countries or been occupied by the enemy. Some of those bills were sent out for presentment before the outbreak of war, but it was not possible to say whether they had been duly presented for payment to the acceptors or not or whether they had been lost. Others could not be sent out at all. Sections 64 and 66 of the Negotiable Instruments Act (XXVI of 1881) provide that all bills of exchange must be presented at maturity and if such presentment is not made, the drawers of the bills are discharged from liability to the holders. The dilemma in which the Exchange Banks found themselves was that they were unable to present the bills to the acceptors; nor were they able to sue the drawers on them.

**The Hindu Disposition of Property Act.**—The last Act passed during the year is noteworthy for two reasons; first, it is passed on the initiative of a non-official member of the Legislative Council, and second, it redresses a grievance which the Hindu Community laboured under for long. Where a Hindu settles his property for the benefit of his children and grand children, his paramount object is to provide not only for his children and grand children then in existence but also for those to be born thereafter. Yet the law steps in and defeats his second intention. This difficulty is sought to be remedied. The Act accordingly provides that no disposition of property by a Hindu whether by transfer *inter vivos* or by will shall be invalid by reason only that any person for whose benefit it may have been made was not in existence at the date of such disposition. The provisions of the Act can be applied to the Khoja Community in British India, if they apply for the purpose to the Governor-General in Council.

# Imperial Legislative Council.

The first meeting of the Imperial Legislative Council in 1916 was held at Delhi on February 15. The Indian Ports Amendment Bill was referred to a Select Committee. The Indian Trusts Amendment Bill was taken into consideration and passed. The Defence of India Amendment Bill which incorporated in a legislative measure an ordinance passed when the Council was not sitting, designed to stimulate the production of wolfram, was passed. Sir Pardee Lukis moved that the Indian Medical (Bogus) Degrees Bill should be referred to a Select Committee. He expressed his satisfaction at the replies received from the authorities consulted, which showed such a consensus of opinion in favour of the Bill on the part of the educated community both European and Indian, whether doctors or laymen. The real object of the Bill was, he said, to improve the status of the independent colleges and not to destroy them. Mr. Surenranath Banerji opposed the motion on the ground that private medical schools would be bound to disappear, and this in view of the paucity of qualified medical men would be a great disadvantage. The same point of view was expressed by several other non-official members and Sir Pardee Lukis in replying thereto maintained that the longer the Bill was postponed the greater would be the vested interests opposed to it and the more difficult would it be to cope with them. The motion was agreed to.

Mr. Surenranath Banerji moved a resolution instructing the Provincial Governments to take vigorous measures for the prevention of malaria and to publish an annual statement showing the progress made in each province in this manner. It would be no exaggeration, he said, to say that some of the various parts of Bengal had been decimated by malaria. In Bengal the mortality from fever in 1912 was 959,000; 1913, 965,000; 1914, 1,061,000, the mortality from fever for the 10 months in 1915 showed an increase in the death-rate. Simultaneously, the birth rate in Bengal for 1912, 1913 and 1914 was 35.30, 33.75 and 33.22 per mille. There had, therefore, been a decrease in the birth rate between 1912-1914. In the same period the death-rates were 1912, 29.77; 1913, 29.38 and 1914, 30.97. They thus had an increasing death rate and a decreasing birth rate for the period he had taken. In the United Provinces and the Punjab, a similar state of things existed. Malaria was also spreading in Bihar. After all malaria was a preventible disease but the local bodies who had chiefly to do with the sanitary conditions in rural areas had insufficient means for the purpose. The resolution was accepted on behalf of Government by Sir Edward Maclagan, who narrated the measures taken by Government to deal with malaria and adopted.

The Council reassembled on the 22nd of February when Mr. Low presented the report of the Select Committee on the Bill further to amend the Indian Ports Act of 1908. Mr. Setalvad introduced the Hindu and Moslem Disposition of Property Bill. In so doing he said "The Bill proposes to remove certain disabilities under which Hindus and

Mussulmans labour in regard to the disposition of their property, and Members must have noticed that it is merely an enabling Bill, a Bill that enables Hindus and Mussulmans to dispose of their property in favour of unborn persons, if they choose to do so. At present what the Courts have held about dispositions of property by Hindus and Mussulmans is this, that it is not competent to a Hindu or Mussulman to make a true settlement in favour of persons not born; that it is also not competent to him to make any bequest by his will in favour of unborn persons, the effect being that if a bequest is made by a will in favour of persons who are not in existence at the date of the death of the testator, from which date in the eye of the law the will speaks, those people are not competent to take it." The Parsis and Christians, he added, had the liberty which it was proposed to confer on Mussulmans and Hindus under this measure. Since the Bill had been published there had not been a note of dissent in the country with regard to it. Mr. Dadabhoi pointed out that the Bill though brief was very important and sought to effect a very important change in both Hindu and Mahomedan law. Whilst the provisions of the Bill were suitable and acceptable he thought the public should have an extended opportunity of expressing its opinion in regard to it. On this ground he moved as an amendment that the Bill be circulated for the purpose of eliciting public opinion thereon. Khan Mian Muhammad Shafi, in supporting the amendment, pointed out that the ordinary procedure was that the Bill after being introduced should be published in the various provincial gazettes and the opinions of local governments and the various communities be taken thereon. Mr. Setalvad asked the Council to drive a coach and four through the ordinary procedure and to refer his bill to a select committee which should report by the 24th March. No ground whatsoever had been made out in support of this extraordinary procedure. Mr. Lowndes, Law Member, said that in so far as the Bill sought to remedy an obvious anomaly in the legal position of the Hindu and Mussalman communities, its principles commanded his entire sympathy. There was, however, a larger question foreshadowed in the background namely how far it was legitimate and how far it was possible to alter the personal law of Hindus or Mahomedans. That was a subject which had always been zealously guarded under all legislative attempts in this country. He agreed to the amendment which was put and adopted.

The Maharaja Ranaji Sinha of Nashipur, proposed a resolution recommending the Governor-General in Council that a sanitary board consisting of officials and non-officials be constituted under the Government of India to advise as to the sanitary needs of the country. In so doing he gave the following statistics illustrating the sanitary conditions in India. There are altogether 68 municipal towns, and the total population of these towns is 19,536,931. Out of this total population 546,074 died from all causes in 1914. The figure for 1913 was 611,761, and fever alone contributed to 200,977 in 1914 and 197,221 in 1913.

"Deaths from other causes such as cholera, plague and respiratory diseases were as follows:—

	1914.	1918.
Cholera .. .. .	30,461	23,015
Plague .. .. .	35,537	32,154
Respiratory diseases .. .. .	76,523	69,316

"Now we take the whole of British India, including towns, it appears that out of the population of 240,995,560 the total number of deaths from all causes was 7,057,806 in 1914; whereas the figure in 1918 was 6,845,018. The annual sanitary reports of 1915 are not yet published, so the figures for that year could not be found, but I am afraid there will not be any appreciable improvement in that year's return. Sir, there are many towns and districts whose populations are gradually decreasing, and so

sanitation can no longer be left as a matter of local concern only, but it has become an Imperial question also, and the Government of India in their Resolution on sanitation has also declared that Government of India retains in their hands the power of giving general direction of a policy of public health. Sir Sankaran Nair, Member in charge of the Education and Sanitary Departments, opposed the motion, because it contemplated the interposition of a Sanitary Board between the Government of India and the Local Governments. The policy of the Government of India was to keep the control of research under itself, but to decentralise the other branches of the administration. There was, therefore, no room for such an interposing body as was proposed in the resolution. The motion was put and rejected.

Maharaja RamajitSinha of Nashipur next proposed "This Council recommends to the Governor General in Council that the Local Governments and Administrations may be instructed to earmark such proportion of the assignments of Public Works Cesses to the local bodies as they deem proper for the purpose of supply of pure drinking water and for other sanitary measures." After detailing the very large grants made by the Government of India for the purpose of rural sanitation amounting to five crores of rupees both recurring and non-recurring and also in assigning the entire proceeds from local cesses to district boards of Bengal, Bihar and Orissa, the United Provinces, the Punjab, and North West Frontier Provinces, he proceeded to analyse the manner in which the intention of the Government of India had been carried out in practice. He said that the following figures would show the amount of cesses surrendered and the amount spent by District Boards for rural sanitation in the years 1913-14 and 1914-15:—

	Grant 1913-14.	Amount 1913-14.	Grant 1914-15.	Amount 1914-15
Bengal .. .. .	29,90,367	4,78,373	30,72,802	7,66,446
Bihar and Orissa .. .. .	23,26,704	1,95,948	25,51,453	3,28,561
United Provinces of Agra and Oudh ..	Not Avail- able.	1,11,850	32,02,744	1,52,821
Punjab .. .. .	2,21,072	31,048	Not a avail- able.	31,042
North West Frontier Province .. ..	26,973	8,762	28,460	11,528
Total .. .. .	....	....	....	12,90,418

"From this statement which I have just now read, it appears that the total grants for 1913-1914 was Rs. 87,67,860, whereas District Boards spent only Rs. 8,25,981; and in the year 1914-15 the total grant amounted to Rs. 96,76,533, whereas they spent only Rs. 12,90,418. From the figures which my Honourable friend Sir Edward MacLagan very kindly supplied to me, and for which I am grateful to him, it appears that the District Boards of these five provinces prior to this grant in 1912-13 spent Rs. 4,93,676 for water supply drainage and other sanitary purposes; and I presume that they used to spend similar sums for that purposes; and if this sum be deducted from their expenditure for the years 1913-14 and 1914-15, the figures will stand thus: Rs. 3,32,305 for 1913-14 and Rs. 7,96,742 for 1914-15. In other words out of the total

grants of Rs. 1,78,44,393 only Rs. 11,29,047 were spent, i.e., about 6 per cent has been expended on this important matter. It is thus evident that the local bodies have failed to appreciate the intention of the Government of India in making this grant."

Sir Edward MacLagan, Secretary for Education and Sanitary Departments, pointed out that the Resolution could not be accepted in the form in which it stood. He suggested that it be moved in the following terms:—"That this Council recommends to the Governor General in Council that the attention of the Local Governments concerned may be invited to the orders issued by the Government of India on 1st March 1913 regarding the transfer of certain local and public works cesses to district bodies in which the Government of India expressed a wish that a substantial part

of the income thus provided should be set apart for the improvement of rural water supply for anti-malarial measures, for the protection for grain stores and markets in plague infected localities and generally for the sanitation of villages and small towns." The mover accepted the amendment which was adopted.

The Council reassembled on March 1st, when the financial statement for 1916-17 was laid upon the table. This is fully summarised in this section dealing with the Indian Finance (See page 181.) The Finance Member Sir William Meyer, subsequently introduced the **Indian Tariff Amendment Bill** to give effect to the changes in the tariff foreshadowed in the Budget. This was considered at the session of the Council on March 7, after the **Foreigners (Trial by Court-Martial) Bill** had been adopted. Dealing with the **Tariff Bill**, the Finance Member pointed out that the only important amendment dealt with was the proposed duty of 7½ per cent. on pearls. Representations from Bombay had shown that this would be a great hardship in view of the fact that the bulk of the pearls are imported into India from the Persian Gulf and are then re-exported. India was thus a sort of a middle-man in this business and it was pointed out that by putting such an import duty on pearls the trade would be killed and would go elsewhere. If it were found that there was any difficulty in identifying pearls and that the duty would have really prejudicial effects on the pearl trade they would be exempted from the import duty under Section 23 of the Sea Customs Act. Sir Gangadhar Chitnavis said that the Bill would command general approval. The deficit to the finance was disquieting but the elasticity of the Indian revenue had always been a matter of surprise and satisfaction and there was much to be said for the view that its normal expansion in times of peace would be sufficient to cover all their liabilities. Sir Fazlulbhoj Currimbhoy said the uncertainties of the situation both military and financial compelled their assent to the bill. Their reserves both in India and in England must be maintained in their entirety and any temporary depletion must be made good at the earliest opportunity. However both therefore he might ordinarily be to support additions to taxation especially when they were expected to result in a fairly big surplus, he believed they became necessary even though they held that the commercial prosperity at the end of the year would substantially increase the Indian revenues in more directions than one. The necessity of additional taxation having been accepted the Government arrangements appeared well devised to every dispassionate critic. It would have been consonant with public feeling if the duty on salt had not been increased but on a careful consideration of all the circumstances he did not press for a readjustment. Mr Dadabhoj welcomed the Bill not so much for the revenues the alteration in rates provided in it would yield but for the evidence it contained of a decided and he hoped a permanent change in the **fiscal policy** of the Government. The Indian public looked forward with hope to the maintenance of the increased scale of import duties for a sufficiently long time. The three points in the Bill which called for serious con-

sideration were the retention of the countervailing excise duty upon Indian cotton, the omission to levy the higher scale of customs duties upon the cotton imports and the exclusion of raw cotton from the new scheme of export duties. Khan Mian Muhammad Shafi supported the Bill not only because the Government was perfectly justified in proposing the additional taxation embodied therein but also because whilst opening up fresh and perfectly legitimate sources of income to the Indian Exchequer it was calculated to afford protection to some of their indigenous industries and to promote the cause of temperance. The Finance Member in expressing his gratitude for the support given to the Bill fully agreed with what had been said on the question of the **cotton import duties**. The members recognised what the Government, of India would have liked to do had they had a very free hand in His Majesty's Government, taking the interests of the whole Empire into consideration he had come to a different decision.

Mr. Dadabhoj moved as an amendment that the Government should dispense with the proposed addition of four annas per maund to the existing **tax upon salt** of one rupee per maund. He did so on the ground that it was a tax which weighed upon the poor and the estimated revenue of six hundred thousand pounds could be raised in other ways sparing the masses. The amendment received a large measure of support but the Finance Member in opposing it pointed out that the salt duties which stood at 2½ rupees per maund at the commencement of Lord Curzon's viceroyalty had been reduced by successive stages to one rupee per maund. Ever since this reduction there had been a steady increase in the annual consumption but by 1909 a point was reached at which the purchasing power of the people was affected much more by agricultural conditions than by a purely nominal rate of duty. In the financial circumstances it was impossible for the Government to do away with the additional revenue of six hundred thousand pounds. The amendment by permission was withdrawn.

Sir Ibrahim Rahimtoola moved the following resolution "That in column 4 headed rate of Duty" against item 51, Textile Fabrics, Part II, new Schedule II, for the figures and word "3½ per cent." the figure "0 per cent. shall be substituted." He said that he would willingly have acceded to the proposal not to press this amendment but for the fact that he was introducing it with more than one object. "The principal object with which I wish to place this amendment before the meeting is to give expression to the views I hold in regard to the scheme of additional taxation which is under the consideration of this Council, and I cannot very well therefore accept the appeal and not place my amendment before the meeting. The other object with which I wanted to place this amendment before the meeting was in connection with the pathetic admission of helplessness which is contained in the Finance Minister's lucid and eloquent Financial Statement and with which I entirely sympathise particularly so, as the position is that the Government of India have the advantage of representation and hearing before a final decision is reached by the Secretary of State, while we

the Non-official Members, have to submit to the decisions in some cases arrived at by the Government of India on our resolutions without knowing our reasons. So in view of our own helplessness, you can appreciate that we cordially sympathise with the helplessness of the Government of India in this particular respect." The Finance Member said that this was a practical matter. The Government of India would be glad if they had been able to increase the cotton duties and duties on cotton goods but that it was not desirable at the present time. In India they were in all political and Imperial matters subordinate to His Majesty's Government at Home. The amendment was negatived.

Pundit Madan Mohan Malaviya moved that in Schedule III after item 3 the following item should be inserted: "3-A Wheat, Indian munda of 82½ lbs. the avoirdupois weight Rs. 0-4." He said this export duty would bring in about 39 lakhs of rupees. Mr. Low, in speaking on behalf of the Government, pointed out that the tax would have to be paid by the grower in view of the competition with other wheats in the British market the duty would fall entirely on the producer. The amendment was withdrawn and the Bill was passed.

The Bill to amend the **Income Tax Act of 1886** in order to provide for the fresh basis of taxation laid down in the Budget was then taken into consideration. Sir Ibrahim Rahimtoola opposed the increase in the income-tax proposed by the Bill. He maintained that there was no case for any increase in the income-tax at the present time. He was not opposed in principle to the increase in the income-tax nor to the salt tax if there was justification for it. His contention was that there was no justification for either an increase in the income-tax or raising the salt tax. He was opposed to any fresh taxation which was imposed for the purpose of providing a surplus. The general course of Indian finance showed an almost invariable surplus in addition to which Government had very large reserves on which it could draw in the event of the season proving an unfavourable one. Consequently no case had been made out in support of additional taxation to produce a surplus of one million pounds. Mr. Dadabhai said that the members of the Council were prepared to support Government in any proposal to levy imposts for the successful prosecution of the war. He generally supported the Bill, with the reservation that the scheme of taxation it legalised should be overhauled on the complete rehabilitation of their finances. Pundit Madan Mohan Malaviya said that whilst the proposals for additional taxation generally were equitable and sound and showed a great deal of consideration on the part of the Finance Member and his colleagues there was no proposal which was so eminently equitable as that to introduce a graduated income-tax. Khan Bahadur Mian Muhammad Shafi gave his willing acquiescence to the imposition of an additional income-tax. Rai Sitanath Ray Bahadur expressed the opinion that the Bill introduced a reasonable form of taxation and the distribution had been carefully and equitably made. Sir William Meyer, Finance Member, replying on the debate disposed of the fiction that the **balances of the Govern-**

**ment of India** which normally amount to about 16 millions were available in an emergency. The balances of the Government of India were normally four millions in London and 12 millions in India itself; those in India were scattered all over the country and were the joint products of the balances in every tahsil and district treasury. There was only a very small portion in India, practically the amount held in the reserve treasuries, that might be promptly used. Dealing with the objection that the taxation was imposed for the purpose of a **surplus**, he argued that it is particularly difficult to budget for India. Sir Guy Fleetwood Wilson had described the Indian Budget as a gamble in rain. It was now in ever greater measure a **gamble in railways**. The figures might be materially altered, generally to the good, sometimes unhappily to the bad, by the character of the railway receipts. His own personal view was that if any remission of taxation was practicable in the future the first to be considered should be those which especially affect the poor. Pundit Madan Mohan Malaviya proposed an amendment that the limit of exemption from income-tax should be raised from 1,000 to 1,200. The Finance Member, whilst regarding the proposal with a good deal of personal sympathy, could not accept it in the present state of the finances. It would involve roughly a loss of 140,000 pounds of revenue. Mr. C. Vijayaraghava Chariar proposed an amendment designed to levy Indian income-tax on Indian securities held in England. The amendment was negatived and the Bill was passed.

The Council reassembled on the 9th March when the Finance Member opened the **first** stage of the discussion of the Budget. Sir Ibrahim Rahimtoola moved that the estimate of **revenue from salt** be reduced by £600,000 so that the rate of taxation may be retained at one rupee per munda as during the current year. He said that his object in moving this resolution was to appeal to the Government to consider whether, having regard to the fact that they had already obtained a surplus of £400,000, they should obtain a further £600,000 estimated to be obtained from the salt tax and swell the surplus from £400,000 to a million pounds. Mr. Surrendranath Banerji supported the proposition which was opposed by the Finance Member on the ground that the Government could not afford to face the year with a smaller surplus than that provided in the Budget. The motion was put and rejected.

Mr. Surrendranath Banerji proposed that the Council recommends to the Governor-General in Council that the grant to the Province of Bengal be increased by six lakhs, or by such other suitable sum as may be deemed necessary, to carry on **anti-malarial operations** in selected areas. He said this was a necessary corollary to the resolution accepted by Government in February last, namely, that instructions should be issued to local governments to take vigorous measures for the prevention of malaria. The chief obstacle to such measures was the lack of funds. Sir Sankaran Nair, Education Member, opposed the proposition. It asked for the grant to the province of Bengal of a certain sum of money. The Government of Bengal had not however asked the Government of India

for anything nor had they said they were going to take any anti-malarial measures for which they wanted money. The arguments should in the first case be addressed to the Provincial Legislative Council. The resolution was withdrawn.

Mr. Surrendranath Banerji next moved that the grant to the Province of Bengal be increased by three lakhs to meet the cost of equipping the Calcutta University College of Science. He pointed out that this college owed its existence to the philanthropy of Sir Taraknath Palit and Sir Rash Behari Ghosh who between them had given a sum of Rs. 25 lakhs of rupees. The needs of the College at the present moment were three and a half lakhs of rupees as non-recurring expenditure. Sir Sankaran Nair opposed the resolution for reasons similar to those advanced in opposition to the previous resolution. No application either by the University or by the Government of Bengal was pending before the Government of India for any grant. The resolution was withdrawn.

The second stage of the financial statement was proceeded with when the members of the various departments introduced the heads of expenditure coming within their province.

Dr. M. N. Banerji moved the following resolution: "That this Council recommends to the Governor-General in Council that Local Governments be asked to consider the advisability of establishing institutions for the purpose of giving medical students a special course of training conducted in the vernaculars so as to qualify them for ordinary medical practice in rural areas, and of encouraging and assisting deserving private enterprise to provide such medical education". In so doing he said that the question of supplying sufficient men trained in western methods of treatment for the civil and military administration of the country and of supplying the medical needs of the country had engaged the attention of Government since the commencement of medical education. But in spite of the intention of Government the vernacular schools impelled by the force of advancing medical science and by a natural desire to improve themselves had continued to raise their standards and had come to a point where they could hardly be considered vernacular schools. The remedy was to go back if possible to the old standard of medical schools or if that is not possible to start new institutions with the humbler aim of training village practitioners. Sir Pardey Lukis accorded to the resolution his most cordial support, even though he could not agree to the lowering of the standard of existing medical institutions. It must be understood that these vernacular schools should be entirely separate institutions. There should be no attempt to graft vernacular education upon any English teaching school which either was or was about to be affiliated to a recognised Indian University or to a state medical faculty or to any authorised examining body. The resolution was accepted.

When the Council reassembled on the 15th March Mr. C. E. Low presented the report of the Select Committee on the Indian Ports Amendment Bill. The Bill as amended was passed.

Sir Pardey Lukis presented the report of the Select Committee upon the Indian Medical (Bogus) Degrees Bill. Sir Gangadhar Chitnavis said that the Bill as it had emerged from the Select Committee was shown of many of its objectionable features. He hoped that as a further supplementary and precautionary measure adequate financial aid would be given by Government to the private medical institutions, if any, that might be threatened with extinction and that they would in due course be affiliated to the universities. Rai Ghanashyam Barua was glad to find that the Bill as amended by the Select Committee had met with a most unanimous approval and he hoped that the whole country would receive it with a free heart. Pandit Madan Mohan Malaviya submitted that the sounder way to deal with the existing situation was to create more medical colleges in order to afford greater facilities to students requiring medical training. Mr. C. Vijayaraghavachariar proposed an amendment to confine the scope of the Bill to medical degrees, titles, diplomas and licences without prohibiting the issue of certificates or other documents implying or stating that the holder of them can practice western methods of medical science. Sir Pardey Lukis was unable to accept the amendment which was defeated by 41 votes to 9.

Mr. Surrendranath Banerji next proposed an amendment providing that until local governments opened or recognised lower standards of vernacular schools nothing in clause 3 should be deemed to preclude existing private medical institutions from granting certificates to their passed students. Sir Pardey Lukis pointed out that the effect of the amendment practically amounted to a proposal that the Act should be indefinitely held in abeyance pending the settlement of the question of vernacular medical education. The amendment was withdrawn.

Mr. Surrendranath Banerji proposed a similar amendment limited to four years from the commencement of the Act. Sir Pardey Lukis opposed the amendment which was rejected by 35 votes to 15. The Bill as amended was then passed.

Mr. J. H. Abbott moved the following resolution: "That this Council recommends to the Governor-General in Council that wherever there are European Boarding Schools, committees consisting of officials and non-officials be constituted by the Local Governments for the purpose of inquiring into the physical condition of, and the dietary arrangements for, the children therein and reporting thereon to the Director of Public Instruction." He did not ask that the State should deal with the general question of under-feeding but that some measure of protection might be afforded to the children attending these schools. It had been forcibly brought to his attention, although he had not sought for the information, that children in a robust state of health were sent to such schools by parents, but when they returned home for their vacation they presented a more or less washed out anæmic appearance. These conditions could not be attributed to any other cause than that of want of sufficient nourishment, insanitary environments, and perhaps too, at times, aggravated by harsh or even cruel, punishment. Sir Sankaran Nair

said that Government were prepared to forward a copy of the resolution with the speech of the mover and the proceedings of the day to the local governments for them to take action where the local conditions justified it. Further than that they were not now prepared to go. Mr. Abbott accepted the proposal and the resolution was withdrawn.

Khan Bahadur Mir Asad Ali Khan moved the following resolution. "That this Council recommends to the Governor-General in Council that the Government of India, in consultation with Local Governments, should investigate the possibility of placing the ancient and **indigenous systems of medicine** on a scientific basis and increasing their usefulness." He said, there were good reasons why this investigation should be made. In the first place the existing medical institutions as well as medical practitioners were quite inadequate to meet the growing requirements of the country. The rate of mortality was also very high when compared with that of the United Kingdom. The resolution met with a considerable measure of support and was supported by Sir Pardee Lucks. The longer he remained in India, he said, and the more he saw of the country and its people, the more convinced he was that many of the empirical methods of treatment adopted by the vaidas and hakims were of the greatest value. The resolution was accepted.

Mr. Dadabhoi moved that steps be taken for the exhibition in all schools and colleges under Government control of the official **war films** and for the introduction in them generally of the cinematograph for the imparting of instruction in hygiene, sanitation and agriculture. The solid results accruing from this proposal would be fully worth the expense. Mr. Mant said he was sure the resolution would command general sympathy, although he was doubtful of the advantage of introducing the cinema as a part of the curriculum in their agricultural schools and colleges. Mr. Sharp said that any proposal for the encouragement of visual instruction was to be welcomed and was fully in accord with the policy of the Government of India. If the resolution was amended in the following form. "That this Council recommends to the Governor-General in Council that steps be taken by Government for the exhibition of the official war films and that special facilities be given to pupils of Government institutions to attend these exhibitions and that encouragement be given to the development of visual instruction in schools and colleges under Government control" he was prepared to accept it. The amendment was carried.

On the 16th March Mr. Dadabhoi moved the following resolution: "That this Council recommends to the Governor-General in Council that measures be devised with the help, if necessary, of a small representative committee of officials and non-officials, for an amelioration in the moral, material and educational condition of what are known as the **Depressed classes** and that, as a preliminary step, the Local Governments and Administrations be invited to formulate schemes with due regard to local conditions." The classes embraced in his resolution, he said, included a total strength of 70 million souls or a little less than a quarter of the population. The reclamation and

elevation of these people ought to be their chief concern. If India has to make sound progress as a whole the moral and material condition of the people in the lowest ranks could not be neglected or even regarded with benevolent indifference, but somehow the problem had not so far been tackled with that earnestness of purpose and determination which a conviction of its gravity and supreme importance should insure. After long years the educated Indian was slowly waking up to the grim realities of the situation but the amount of prejudice was still great. On the other hand, the policy of Government was one of drift: more accurately speaking the whole administration in relation to these unfortunate classes was marked by the absence of a definite policy. Sir Gangadhar Chitnavis whilst not agreeing with the somewhat exaggerated picture of the treatment of the Depressed Classes by the higher classes, shared the earnest desire of the mover that the elevation of the Depressed Classes should be systematised and whenever possible pushed forward. Mr. Rama Rayanagar entirely associated himself with the resolution. Mr. Surenranath Banerji sympathising with the object of the Resolution regretted that the mover had attacked the Hindu community. Mr. Dadabhoi must bear in mind that they were the inheritors of past traditions of a civilisation as ancient as the world. They could not push aside all those things which had come down to them from the past. Mr. Hill expressed his bewilderment with which he had listened to the remarks of the mover, who assumed that Local Governments were sitting with folded hands and required the leadership of the Government or India. He repudiated with the greatest possible emphasis the suggestion that the local governments were indifferent to this problem. Nothing could be farther from the facts. Pundit Madan Mohan Malaviya protested against the action of the mover in lecturing the Hindus on the subject of their socio-religious disabilities. Sir Reginald Craddock maintained that the Government of India and every local government had always been ready to befriend the poor, the oppressed or depressed, in the country whatever their caste, race or status. Government had been accused of following a negative policy of drift. But the problem was exceedingly wide and it was impossible to deal with it by means of committees. The problem extended over the whole range of Government from top to bottom. Whilst extending their sympathy to the object aimed at by Mr. Dadabhoi they could not go farther than promise to refer the question to local governments and ask them whether they can do more than they are doing. The resolution was by permission withdrawn.

The Council reassembled on March 24, when the general Budget debate proceeded. This is a survival from the constitution of the Council prior to the enlargement of its powers in 1908-09 and now serves no useful purpose. All the points are better dealt with in the specific proposals which have been summarised in the earlier discussion.

The debate concluded with a notable survey of the position as a whole by the Viceroy. In so doing he dealt at some length with the very important fiscal question raised by the



exclusion of cotton imports from the higher scale of duties proposed. On this subject he said "Sir William Meyer has explained the attitude of His Majesty's Government towards the proposal made by the Government of India that in the new taxation proposed in this Budget, the import duty on cotton should be raised, leaving the excise duty on cotton at its present rate, an assurance being given by His Majesty's Government of the future abolition of the excise duty as soon as the financial situation would permit of such a course. He has also explained that His Majesty's Government feel that the raising of this question at the present time would be unfortunate since it would provoke the revival of old controversies at a moment when it is specially desired to avoid all contentious questions both in England and in India, and that it might prejudice the ultimate settlement of larger issues raised by the war. I need hardly say that the Government of India have no desire to create controversy here, in England, or anywhere else at the present time, by the discussion of questions affecting Indian interests, but they are glad to have had the opportunity of placing on official record their views that the import duties on cotton fabrics should be raised and that the excise duty should for the present remain at its actual figure, and an assurance given that it would be abolished as soon as financial considerations will permit. But His Majesty's Government, in expressing their desire that a conflict should not be raised at the present time over the cotton duties, have made a definite declaration which has already been quoted by the Finance Member in his speech introducing the Financial Statement, but which I now repeat as I regard it as of very great importance to India. It is as follows:—

"His Majesty's Government feel that the fiscal relationship of all parts of the Empire and the rest of the world must be reconsidered after the war, and they desire to leave the questions raised by the cotton duties to be considered at the same time in connection with the general fiscal policy of the Empire and with the share, military and financial, taken by India in the struggle. His Majesty's Government are aware of the great interest taken in this question in India and of the impossibility of avoiding all allusion to it when new taxation has to be raised, but they are confident that their decision is in the best interests of India and that premature discussion of this particular issue could only be harmful."

"Now I wish to be very careful in not reading into this declaration an interpretation that would not be justified, but I think that I am fully justified in saying that it contains an assurance that the **fiscal relations of India** in the Empire towards the Empire and towards the rest of the world will be reconsidered after the war in connection with the general fiscal policy of the Empire, and that the best interests of India are being taken into account in postponing a decision about cotton duties which after all form only a small fraction of the fiscal system built up in India."

The Viceroy also dealt with the question of the abolition of indentured immigration which had been several times before the Council, and narrated some of the steps which were being

immediately taken to deal with the hardships of the situation. Reviewing foreign affairs as they affected India, Lord Hardinge said "Turning to foreign affairs nearer home it is pleasant to be able to state that in **Persia** there has been a very distinct improvement in the situation. We are on the most friendly terms with the Persian Government, who have at last realised the danger to which their country was exposed by the machinations of German and Austrian hands and are doing their utmost to suppress them. I need hardly say that in their efforts to restore order, the Persian Government will continue to have our hearty co-operation and assistance in any way that they may desire.

"Our friend and ally, the Amir of **Afghanistan**, continues to maintain very friendly relations with the Government of India, and has recently renewed his assurances to observe an attitude of strict neutrality, and we have naturally implicit confidence in his royal word.

"On the **frontier** perfect tranquility has for some time prevailed, except for raids by gangs of Mahsuds in the Dera Ismail Khan District. The cup of their misdeeds is already overflowing, and the day of retribution is at hand. As soon as our pre-occupations elsewhere are relieved, and when it suits our convenience it will be necessary for the Government of India to take drastic steps to put an end for ever to the campaign of murder and plunder that has disgraced the Mahsud tribe during the past few years.

"Except in Bengal where I am sorry to say, there has been a regrettable number of **murders and dacoities**, which dim the fair fame of that province and which every effort should be made not only by the Government, but by the people themselves to suppress, the internal situation of India could hardly be more favourable and it is a source of profound satisfaction for me on the eve of my departure to be able to say so. We do not feel the shock of battle here as the nations feel it in Europe, but we have had ample evidence of German designs to create trouble in India which have so far proved abortive, based as they were on the fallacy that India would be disloyal to the Empire. During the past 20 months of war the people of this land have displayed a loyalty and patriotism deeply appreciated by the Empire at large that have been beyond all praise and have entirely justified the confidence and trust that I reposed in them. Heads of Governments have told me that never in their experience have the relations between the Government and the people been closer or of greater confidence and I readily believe it. When I hear pessimistic prophecies or apprehensions as to the **future of India** I ask myself who, 20 years ago, would have predicted the magnificent loyalty of the Ruling Princes and the people of India which we have seen since the outbreak of war? None ever doubted the valour of the Indian Army, British and Indian. But who would have said 20 years ago that it would be possible to send out of India to the different theatres of war army after army of brave and experienced soldiers? When it is remembered that the largest expedition that ever left the shores of India before the present war numbered only 18,000 men, and that

since the outbreak of war, India has despatched about 300,000 soldiers overseas and has contributed several million pounds worth of war material to the Empire. I think we have every reason to be proud of the efforts that India has made, and of the situation on, and inside our frontiers that have rendered such efforts possible. Many gallant men have, alas, died for their country. Of these, the whole Empire is the tomb."

In concluding his speech Lord Hardinge spoke somewhat fully as to the **political future of India**. On this point, he said: "During the past few months I have seen mention made in speeches at meetings in the country and in the press of self-government, colonial self-government and Home Rule for India. I have often wondered whether those speakers and writers fully realise the conditions prevailing in Dominions, such as Canada or Australia, which render self-government possible. I wish that some of these could visit the Dominions and see for themselves. A study of the history of these Dominions would show that the development of their present self-governing institutions had been achieved not by any sudden stroke of statesmanship, but by a process of steady and patient evolution which has gradually united and raised all classes of the community to the level of their enhanced responsibilities. I do not for a moment wish to discountenance self-government for India as a national ideal. It is a perfectly legitimate aspiration and has the warm sympathy of all moderate men. But in the present position of India it is not idealism that is needed but practical politics and practical solutions to questions arising out of the social and political conditions in this country. We should look facts squarely in the face and do our utmost to grapple with realities. To lightly raise extravagant hopes and to encourage unrealistic demands can only tend to delay and not to accelerate political progress. I know that this is the sentiment of many wise and thoughtful Indians. In speaking thus frankly it is far from my intention to create a feeling of discouragement for nobody is more anxious than I am to see the early realisation of the just and legitimate aspirations of India, but I am equally desirous of avoiding all danger of reaction from the birth of institutions which experience might prove to be premature. During the past 51 years I have steadily kept this aim in view and, as far as I am able, will do all in my power to help the course of Indian progress in the future.

"Nothing that has occurred during the last 41 years has made me change by a hair's-breadth my views as to the soundness of the policy defined in that much disputed third paragraph of the Despatch of the Government of India of August 25th, 1911, the responsibility for which rests especially upon myself in conjunction with my late friend Sir John Jenkins. The meaning of that paragraph has been much discussed, but as it is written in plain English, I see no necessity for explaining it. I only wish to emphasise the fact that it was not contemplated that the policy adumbrated should be fulfilled in its entirety in the immediate future, or within a specified period of time, but that the progress towards the foreshadowed

goal should be steady and gradual. Speculation as to the rapidity with which progress is to be made or the precise definition of the goal to be achieved would be profitless, but my strong advice is not to go too fast and to be sure that you can walk firmly before you try to run. This is very clearly expressed in the text of the paragraph and I claim that during the 41 years that have elapsed since that Despatch was published the Government of India have been true to the policy indicated although they have not always been able to give full scope to their wishes. During that period Bengal has become a Presidency with a Governor in Council; Bihar and Orissa form a Province with a Lieutenant-Governor in Council and with a majority of elected members in the Legislative Council, Legislative Councils with non-official majorities in each have been given to the Central Provinces and Assam; Bihar and Orissa has received a High Court; and I have no doubt whatever that in a very short time the recommendation of the Government of India for the creation of an Executive Council for the United Provinces and a High Court for the Punjab will be accepted. Surely this is a good record for the past 41 years and surely the place has not been slow.

Finally as regards the position of **India within the Empire** Lord Hardinge said:—The announcement which I made in this Council last September to the effect that India's demand to be represented in future on Imperial Conferences would be sympathetically considered by His Majesty's Government is, I think, likely to become historic for it marks the beginning of a new era, and the growth of more liberal ideas in regard to India not previously entertained. At the same time the reception by the Colonial Press of the resolution relating to the representation of India at the next Imperial Conference, proposed in this Council last September by the Hon. Mr. Muhammad Shafi and unanimously accepted, was most encouraging, and was a good indication of the change in the angle of vision of our fellow subjects in the Dominions towards India, and the place that India should hold in the Councils of the Empire. I feel confident that the statesmen of the self-governing Dominions, recognising the splendid services rendered by India to the Empire during the war will generously seek a modification of the constitution of the Imperial Conference so as to admit the properly accredited representatives of India to sit side by side with them at the Imperial Council table on terms of equality. I rejoice in this matter to leave India with high opportunity before her to take her place, a just and proud place, in the Empire.

The Council then adjourned *sine die*.

When the Council reassembled on the 5th September **Lord Chelmsford** took his seat for the first time as Viceroy. He opened the Council with a long speech in which he reviewed many departments of public activity and dealt especially with the part which India has played in the war in answer to criticisms. Before doing so he touched upon foreign affairs and expressed his pleasure that the relations between His Majesty the Amir of Afghanistan and the Government of India continued to be of the most cordial and friendly character. On the North-West Frontier tranquillity had been

maintained. The relations with Persia had never been more harmonious. In India itself the loyalty of the people remained as steadfast as in 1914, the only exception being Bengal where political daocities and dastardly murders of Indian police officers still continued.

Dealing with the war His Excellency said: "On the outbreak of war, of the 4,696 British officers on the Indian establishment, 530 who were at home on leave, were detained by the War Office for service in Europe. 2,600 combatant officers have been withdrawn from India since the beginning of the war, excluding those who proceeded on service with their batteries or regiments. In order to make good these deficiencies and provide for war wastage, the Indian Army Reserve of Officers was expanded from a total of 40, at which it stood on the 1st August 1914, to one of 2,000.

"The establishments of Indian units have not only been kept up to strength, but have been considerably increased. There has been an augmentation of 20 per cent. in the cavalry and of 40 per cent. in the infantry, while the number of recruits enlisted since the beginning of the war is greater than the entire strength of the Indian Army as it existed on the 1st of August 1914. These remarkable results may be attributed to the confidence inspired by the British Officers of the Indian Army, the cordial co-operation of the civil authorities and the loyal response of the people of India.

"Recruiting has been opened to several classes to whom military service was previously closed. Considerable public interest has been aroused by the sanction given for the formation of a Bengali double company which will be trained on the frontier and sent on active service. The Bengal Stationary Hospital, recently broken up, rendered admirable service in Mesopotamia, and its record there was one of which the promoters of the scheme may well be proud.

"The despatch of so many expeditionary forces from India has necessitated a great expansion in military transport. Four Camel Transport Corps and twenty-seven Mule Corps have been despatched on service, representing a total of over 13,000 men and 17,000 animals. To replace these units and provide for wastage, some sixteen new Transport Corps and cadres have been formed.

"Six labour corps have been sent to the front and some 1,500 overseers, draughtmen, clerks, store-keepers, carpenters, smiths, mechanics, etc., have been despatched to Mesopotamia for duty on military works, and India has supplied large stocks of military materials.

"In respect of medical personnel and equipment—and this is a matter in regard to which the Government of India have come in for special criticism—India's contributions towards overseas expeditions have been on a very big scale. Forty field ambulances, 6 clearing hospitals, 35 stationary hospitals, 18 general hospitals, 9 X-Ray sections, 8 sanitary sections, 7 advanced depots and 1 general medical stores depot are now serving overseas. The personnel provided for these units and other services amounts to 258 officers of the R.A.M. C., 704 I.M.S. officers, 40 lady nurses, 475 assistant

surgeons, 854 sub-assistant surgeons, 724 British nursing orderlies, 2,843 Indian ranks and nearly 20,000 Indian followers. In order to meet the heavy demands on the Indian Medical Service, 344 officers have been withdrawn from civil employment, and some 200 private practitioners and civil assistant surgeons have been given temporary commissions. In the subordinate branches, 205 assistant surgeons and 560 sub-assistant surgeons in various kinds of civil employment have been released for military duty. The strain which has been caused to the Civil Medical Department by these changes and withdrawals has been very great. In the medical sphere, in fact, it must be patent to all that in responding to the demands made upon us, we have gone as far as it was possible to go.

"The Ruling Princes and Chiefs of India have continued to give invaluable assistance towards the prosecution of the war and the relief of sick and wounded soldiers. Among recent contributions have been the Rajputana gift of over 4½ lakhs for aircraft machine guns and motor ambulances, the gift of Rs. 45,000 by His Highness the Maharaja of Rewa and the Solanki Rajput Chiefs for the purchase of aeroplanes; the gift of one lakh of rupees by His Highness the Maharaja Holkar of Indore and of 2½ lakhs by His Highness the Maharaja of Bikaner from his privy purse. Hospital accommodation has been provided or offered by Their Highnesses the Maharajas of Patiala, Bikaner, Datta, Benares, Jind and Kapurthala, the Maharaja of Sirohi, the Nawab of Maler Kotla and the Raja of Suket, and substantial contributions have been received from the Rulers of Cutch, Limbdi, Dasada, Sonpur, Bahawalpur, Faridkot, Manipur, Dhar, Jaora, Barwani, Ali Rajpur, Raglughah and Shahpura.

"The Imperial Service Troops are still doing very valuable work on the various fronts, notably the Mysore Lancers and the Bikaner Camel Corps in Egypt, the Kashmir Rifles, Jind Infantry, and Faridkot Sappers in East Africa, and the Maler Kotla Sappers in Mesopotamia and I am glad to hear that the Kashmir and Jind Darbars have recently received a special message of congratulation from General Smuts on the efficiency of their troops. The Sirmur Sappers had the distinction of assisting in the gallant defence of Kut."

Sir George Barnes introduced the **Enemy Trading Bill**. He said: "The principles embodied in it mark the change of feeling and change of opinion which have taken place throughout the British Empire. Generally speaking, the policy throughout the British Empire at the beginning of the war was to control hostile firms and enemy concerns, and to allow their trading to continue subject to supervision—the principal object of the supervision being to prevent goods or money reaching hostile countries. In the United Kingdom, this end was effected by the appointment of Inspectors, Supervisors, and Controllers, and, I think, very much the same line was taken throughout the Dominions. In India, a stronger policy was adopted, a policy of licenses to trade and licenses to liquidate, the result of this policy being the suspended animation, and not the complete extinction, of the firms concerned. In the United Kingdom, at the beginning of this year, a new Trad-

## Imperial Legislative Council.

ing with the enemy Act was passed which provided that enemy concerns should, in the absence of special reasons to the contrary, be completely wound up, and this policy has been followed, or is in process of being followed, by the Dominions also. The object of this Bill is similarly one of complete extinction of the hostile firms dealt with. I will not say that the proposal is that India should follow the Dominions or the United Kingdom: for I believe that in India we have arrived at the same conclusion quite independently. In these circumstances and pressed with the urgency of the case, His Excellency passed the ordinance which is known as the Enemy Trading Ordinance, 1916, and by his directions I have taken the earliest opportunity of bringing the Ordinance in the form of a Bill for the consideration of the Council. The policy of complete **elimination of German trading interests** which the Home Government and the Governments of the Dominions have each individually thought necessary for their protection seems to the Government of India to be doubly necessary in this country, for enemy trading companies and associations which are not of a trading character have alike been here used for political ends. The Ordinance has been before the public since June last, and so far as I am aware, there has not been one single word of criticism against it and the Bill follows the Ordinance word for word with one or two comparatively small exceptions." The Bill was passed.

Sir George Barnes introduced the **Import and Export of Goods Bill** to provide further power to prohibit or restrict the import and export of goods to and from British India. Sir George Barnes next introduced the **Indian Bills of Exchange Bill** to make provision in connection with the payment of bills of exchange outside India. The **Indian Lunacy Amendment Bill** was introduced in order to provide for the reception of lunatics from foreign possessions in India in Indian lunatic asylums. Mr. C. H. Setalvad proposed that the Hindu and Musalman **Disposition of Property Bill** be referred to a select committee and this was agreed to.

The Council re-assembled on September 19th when Mr. G. R. Lowndes introduced the amending bill of the **Indian Steam Vessels Bill**. The **Indian Lunacy Amendment Bill** was passed.

The Council re-assembled on September 27th. The **Amending Bill** was passed. Also the **Indian Bills of Exchange Bill**. Sir San-karan Nair introduced the **Patna University Bill**. Inasmuch as this presented several novel features its main principles are set out at some length. He said: "The main feature of the scheme is that there should be a central residential and teaching University at Patna. This represents the form of University from which, according to the present ideas, the best educational results may be expected to follow. Some of the members of the Committee desired to have a University established which was entirely of this description, but the majority were of opinion that there were other considerations which precluded the establishment of such a University. There were several colleges in the Province situated at a considerable

distance from Patna, at which students were being already educated for a University career and from which it was impossible to expect a complete migration of students to a central University. It was accordingly decided that in addition to the University colleges at Patna there should be a series of external colleges at various centres outside Patna itself. The central University at Patna therefore, and the external colleges are to be united so as to form a single University governed by common regulations and under the same general control."

Touching upon the organisation and constitution of the University he added "The first Senate and the Syndicate will be constituted by the Act itself. The next and the ensuing Senates will consist of not less than 40 and no more than 60 persons. The Senate will include certain ex-officio Fellows, 4 Fellows elected by the Faculties, 8 Fellows elected by certain classes of Fellows according to the Regulations framed for that purpose. The Senate is only to be a deliberative body. Its resolutions are not binding on the Syndicate. The Senate differs in this respect from the Senate constituted under the Universities Act of 1904, which has the power of making Regulations providing for the courses of study to be followed and the conditions to be complied with by candidates for the University examinations, and also for the conditions to be complied with by schools desiring recognition for the purpose of sending up pupils for the Matriculation Examination.

"The ensuing Syndicates will consist of 16 members, some of them ex-officio. The Chancellor shall nominate 4 persons, and 9 persons are to be elected by the Senate. The Syndicate will have control of all matters concerning education. Under the Indian Universities Act now in force, the executive government of the University is vested in the Syndicate, while under the Bill a full-time Vice-Chancellor appointed by the Local Government is to be the principal executive officer of the University. All matters relating to the administration of the University, rules to regulate the admission of educational institutions to the privileges of the University, and the withdrawal of such privileges, rules about the admission of students to the University and their examinations also will be provided for by the Regulations. The first Regulations are to be framed by the Local Government. Such Regulations may be modified, and new additional Regulations may be framed by the Senate with the sanction of Government. No college will be affiliated without the consent of the Syndicate, the Senate and the Local Government. As to disaffiliation, on the other hand, the Local Government alone might do it after considering the opinion of the Syndicate and the Senate. The Bill which I propose to introduce, if leave is given to me, is intended to give effect to these provisions." The Bill was criticised on the ground that the constitution of the University was of a retrograde character.

The report of the Select Committee on the **Hindu Disposition of Property Bill** was considered and the Bill was passed.

The Council then adjourned *sine die*.

## Bombay Legislative Council.

The Council met in Bombay on March 13, when the Hon. Mr. Carmichael presented the **financial statement**. It showed that the opening balance for the year 1915-16 estimated in the budget at Rs. 1,54,28,000 had been changed to Rs. 1,58,04,000 on the closing of accounts for the previous year. The total provincial revenue was estimated at Rs. 7,46,90,000 and the total provincial expenditure at Rs. 7,66,29,000. The budget for 1916-17 opened with a balance of Rs. 1,38,65,000, the total revenue being estimated at Rs. 7,51,60,000 and the total expenditure at Rs. 7,54,10,000. A Bill to amend the **Bombay Medical Act** of 1912 was introduced and at once passed into Law. It confers the power of exempting, in exceptional cases, persons who are not qualified to be registered under the Act from the provisions of Section 11, which excludes unregistered persons from certain medical appointments.

Among the resolutions discussed in a four days' session was one introduced by the Hon. Mr. Patel recommending the creation of a **Civil Court** for Bombay with jurisdiction of a civil nature not exceeding Rs. 5,000 in value with certain exceptions. Government agreed to consider the desirability of providing additional facilities for the disposal of suits not at present within the jurisdiction of the Small Causes Court without binding itself to any particular course. The Hon. Dewan Bahadur Godbole called the attention of Government to the necessity of checking the **sub-division of agricultural land**. The Hon. Mr. Belvi urged the revocation of a Government order curtailing the **powers of jurors** in Belgaum, but his resolution was lost after it had been pointed out that the order was due to solid reasons and implied no attack on the jury system.

A newly elected Council met at Poona on June 20, when the revised budget was explained and criticised, particularly by the Hon. Mr. Wacha. The Hon. Mr. Curtis introduced the Bill further to amend the **Bombay Municipal Act** of 1888. It proposed *inter alia* that the Municipal Commissioner should have the right to attend the Schools Committee meetings and that he might be nominated to the Legislative Council, and the appointment of the Health Officer as a Professor of Public Health. The Bill was much criticised and referred to a Select Committee after the first reading. Mr. Wacha characterised it as a blow to self-government throughout India and Mr. Desai called it an innocent looking little Bill involving important constitutional changes.

The Council met again on July 25, when the **Municipal Act Amendment Bill** was passed after the removal from it of the two contentious clauses referring to the Municipal Commissioner. The clause proposing the appointment of the Commissioner to Council had been defeated at the previous meeting and the Select Committee had recommended the deletion of the clause empowering the Commissioner to attend the meetings of the Schools Committee. The Hon. Mr. Carmichael introduced a Bill further amending the **Bombay Abkari Act** of 1878 which passed the first reading. Clause 2 brings the Kaira district within the operation of the special provisions of the Act relating to mhowra flowers, and thus was opposed on the ground that hardship to the people would be caused. A Bill to amend the Bombay Police Act passed the first reading without discussion. A resolution introduced by Mr. Paranjypte which was passed by 22 votes to 18, urged that representations should be made to the Government of India to the effect that the rules regarding the use of **text books in recognised schools** were unsatisfactory. At the December meeting the **Abkari Act** was discussed at length and eventually passed the third reading. It was pointed out on behalf of Government that the amendment of the Act had been undertaken to check the illicit distillation of liquor from mhowra flowers in the district of Kaira, and in that way to prevent crime in criminal tribes known as Dharalas and Waghais. It was opposed by the Hon. Mr. Parekh and the Hon. Mr. Patel and a few other members, on the ground that mhowra was used as an article of human food and also as fodder for cattle in the district, and that the Bill, if passed, would cause great hardship. Among other Bills introduced were one to amend the Bombay Port Trust Act and one to amend the Bombay Boilers Act.

A Bill was also introduced to amend certain sections of the District Municipal and Local Boards Acts in order to put an effective check on **corrupt practices** at elections. It was generally approved by the Council, some of the non-official members suggesting modifications in certain directions. It was suggested that a candidate should not be made criminally liable for the corrupt acts of his agents or servants that the term corrupt practice should be more properly defined, and that appeal should be allowed to the High Court in election petitions involving questions of law. The Bill was read a first time and referred to a Select Committee.

## Bengal Legislative Council.

Little Legislative business was performed in the Bengal Council during the past year. Almost the only bill which was carried was the Bengal **Smoke Nuisance** Amendment Bill, one object of which was to abolish the exemption hitherto granted to ocean-going steamers. Some controversy arose between the Government and the Commercial community, and to discover the facts Mr. Beatson Bell, a member of the Bengal Executive Council, spent a night in stoking a steamer's fire. As a result a compromise was framed and adopted. The Financial Statement presented no features of special interest. Mr. Beatson Bell in introducing it said that the Government acting on the instructions of the Secretary of State had rejected every new scheme unless it was imperatively necessary or immediately remunerative. A large number of **resolutions** were moved by non-official members. Babu Mahendra Nath Ray moved a resolution in favour of increasing the proportion of elected members on District Boards to two-thirds. The motion was opposed by Sir Shams-ul Huda as being inopportune since it was in contemplation to substitute Circle Boards in place of Local Boards and any increase in the number of elected members on District Boards should follow this reform. The motion was lost. Babu Surendra Nath Ray moved a resolution to the effect that two seats be allotted in the Bengal Legislative Council to the educated community in addition to existing representation. Mr. Lyon in opposing the proposal pointed out that it would necessitate an amendment to the Act of Parliament, and the motion was withdrawn. A third resolution moved by Mr. P. C. Mitter was designed to make it compulsory for District Boards to spend on water supply no less than one-third of their closing balance for the financial year. This motion was opposed by several non-official members as an interference with the indepen-

dence of the District Boards and was ultimately withdrawn. Several noteworthy speeches were made by H. E. the Governor. On the 4th April, addressing the last meeting of the old Council, Lord Carmichael said that during the past three years 76 resolutions had been proposed, of which 48 were withdrawn, 18 were accepted and 10 rejected. Speaking on the 4th July he explained that he had increased the number of non-official members through the exercise of his power of nomination. Three Secretaries to Government instead of five had been nominated to serve on the Council and the Vice-Chairman of the Port Commissioners had been left out, the place of these officials being taken by non-officials. On the 7th August Lord Carmichael referred to the difficulties which had made it impossible to maintain the **Bengal Ambulance Corps** and announced that the Government of India had decided to sanction a Double Company of Bengalee Infantry raised on the same terms as those offered to the Indian army generally.

Some important statements were made by Lord Carmichael indicating that the Government were convinced of the existence in Bengal of a **conspiracy** organised by persons who were receiving pay from the German Government. To deal with this conspiracy, among whose symptoms were 20 dacoities and 18 murders, the Government had exercised their powers of detention under the Defence of India Act. Lord Carmichael stated on the 4th of April that 218 persons had been thus dealt with. On the 4th of July he mentioned 190 persons were compulsorily domiciled while action had been taken against 21 other men under Regulation III of 1818. Lord Carmichael stated that he was satisfied that the powers under which they had acted had been of real use and that it was his firm conviction that if they had not been employed Bengal would have been in a far worse plight than it was.

## The United Provinces Legislative Council.

The principal measure of the year was the passing into law of the United Provinces **Municipalities Bill**, after a series of meetings of unparalleled length. The session opened on 14th February, when the Prevention of Adulteration Amendment Bill was passed without discussion. In presenting the revised Financial Statement on 15th March, Mr. Pini said that all suggested economies, including postponement of expenditure under the Government of India's special grant for Sanitation and Education, had not done much more than to provide resources to meet excess, and the final Budget

expenditure reached a total of Rs. 6,88,72,000, including special allotments made by the Government of India in the course of the year. The Budget estimates for 1916-17, were framed on cautious lines in view of the entirely abnormal conditions. On the expenditure side they had budgeted for a total expenditure of Rs. 6,80,97,000 as compared with Rs. 6,90,25,000 in the original Budget for the current year, and Rs. 6,87,72,000 adopted for the revised schedules approved by the Finance Committee in October had had to be reduced by Rs. 15½ lakhs.

The **Municipalities Bill** occupied the Council for nearly four sittings. The Hon'ble Babu Brijnandan Prasad proposed an indefinite postponement of the measure, but his motion being lost, he constituted himself the principal opposition critic, the Bill being skillfully piloted by Mr. S.M. Dr. Tej Bahadur Sapru supported the giving of separate representation to Mahomedans, and thought the concession would remove friction between the two communities. The work on the Bill was finished on 1st April. His Honour, the President, thanked the members for the confidence they had shown in the Government, and congratulated the Hon'ble Babu Brijnandan Prasad on the tenacity, courage, good sense and patience shown by him, which had been worthy of the best traditions of the Council. He said there had been no conspiracy of any kind between the Government and any section of the community. The Government attitude had been influenced by a sincere desire to help the two communities to reach an honourable and amicable settlement. (Clause 11, known as the Jehangirabad amendment, was undoubtedly a new feature, but he thought that in the present state of political and racial feeling it was a feature to which it was important to give effect without the least possible delay. The Bill was formerly passed on 3rd April. The principal reforms are the provision of a non-official Chairman with an Executive Officer in the majority of the Municipalities.

On the 25th April, the members of the new Council took the customary oath of allegiance. Pandit Radha Kishan Das moved (a) "That this Council recommends to His Honour the Lieutenant-Governor that he may be pleased to appoint a representative committee to consider the whole question of the representation of the different communities on Municipal and District Boards, and the Provincial Legislative Council, and to submit an early report thereon"; (b) "that this Council further recommends to His Honour the Lieutenant-Governor that till Government has passed orders on the report of such committee, it may be pleased in the exercise of the discretion vested in it by section 11 of the Municipalities Act of 1916, to postpone the introduction of separate Muslim and Non-Muslim electorates in Municipalities."

Mr. Burn, Chief Secretary, went into the history of the question and said that the demand for **separate representation** was first made 10 years ago. How much longer, he asked, were the people of these provinces to go on discussing a matter like this? They had had five years to make up their minds about it, and it was now seven months since the issue was definitely raised in connection with the Municipal Bill. Turning to the remarks made by members that the compromise gave rise to general dissatisfaction among the Hindu community, Mr. Burn said that at least two Hindu members of the Council were quite unrepentant in regard to their share in the compromise, and he asked members to consider another case, the case of a gentleman who was a member of the Council at that time and was now a member of the Imperial Council, Mr. Burn referred to the attacks made on Dr. Tej Bahadur Sapru in the press for supporting the resolution, and said that the language used about Dr. Sapru was such that he said that he could not retain any

longer his public office. The elections then came round and Dr. Sapru, who seconded the clause which was said to have given rise to such general dissatisfaction, was elected by the non-official members of the Council as their representative on the Imperial Council. It seemed to Mr. Burn a misuse of words to say that the compromise which had been effected was bad for want of publication or because it caused dissatisfaction to Hindus. Mr. Burn, therefore, asked the members of the Council so far as the second part of the resolution was concerned to vote against it. The mover wished to postpone operation of section 11 in the Act. That clause related to the fulfilment of a definite pledge given by the Government to Mahomedans and also by the more liberal-minded Hindus. To postpone it now would mean an abrogation by Government of hopes which had been entertained by Mahomedans on the authority of Government. In the first part of the resolution the mover asked for the constitution of a committee to consider the representation of the Hindu community on Municipal and District Boards and Provincial Legislative Councils. So far as Municipal Boards were concerned that question was settled. So far as Councils were concerned, the question raised controversial issues which affected not only the United Provinces but other Provinces of India, and it was impossible that the local Government should be a party to public discussion of the question. Government was perfectly ready to listen to suggestions on the question of communal representation on District Boards. It had been waiting for useful suggestions for the past five years. If there was any general demand for it, there would be no objection to the appointment of a committee. A division was then taken on the first part of the resolution and 11 members voted for the resolution and 27 members against it. A division was next taken on the second part of the resolution, and seven members voted for it, and 27 members against it. The resolution was declared lost.

At the meeting on 11th November, the Hon'ble Syed Wazir Hasan moved that the system of **jury trials** in Courts of Sessions be extended to nine more districts. The mover was supported by a number of members. The Hon'ble Mr. Asthana moved an amendment that the system be extended to all sessions trials in the province. The amendment was lost. The Hon'ble Mr. O'Donnell opposed the motion and said the jury system was an exceptional procedure in this country and was sparingly used by local Governments. On the motion being put it was carried by a narrow majority of one vote. At the meetings on 11th and 12th December, eight resolutions were disposed of, the majority of them being either withdrawn or rejected. One relating to the establishment of village panchayats on the basis of the recommendations of the official committee was accepted in principle. The Government also accepted a resolution recommending that the conditions of jail life should be improved in such a manner as to provide separate accommodation for prisoners, whose offences do not imply moral turpitude and thus prevent their coming into contact with habitual or undesirable criminals.

## Punjab Legislative Council.

During 1916 the proceedings of the Punjab Legislative Council were full of interest. At the meeting held in March the new Financial Secretary Mr. O. F. Lumsden, presented the revised **Financial statement** which clearly showed that the Province had accepted the invitation of the Government of India to co-operate in a policy of severe retrenchment. Mr. Lumsden explained that the balance with which the year 1915-16 had been started was 1½ lakhs below expectations and that the revenue and income fell below the anticipated figure by 8½ lakhs which, however, had been largely set off by the grant of Rs. 6,85,000 from the Imperial Government under the Provinces, 41 lakhs net guarantee under the head Irrigation. On the expenditure side, however, drastic curtailment of projects had reduced the budget figure by nearly 14½ lakhs even though, owing to the regrettable necessity of enrolling additional police and establishing Special Tribunals, increases of expenditure on Law and Police were inevitable. The net result was that it was hoped to close the year 1915-16 with an increase in the Provincial balance of about 8 lakhs instead of a deficit of 3½ lakhs for which the budget was framed. For the budget of 1916-17 the same policy of retrenchment was to be pursued and, even making an allowance for shortage due to poor harvest prospects, it was hoped that the reduction of the provincial balance at the close of the year would amount to Rs. 4,82,000 only. The actual reduction in receipts was estimated at 12 lakhs which, taking into consideration the surplus of 8 lakhs mentioned above, represented a net deficit of 4 lakhs. On the expenditure side an extra lakh was anticipated thus making a probable deficit of five lakhs on the year's work. In the discussion following the introduction of the budget R. B. Ram Sarn Dass moved a resolution that an allotment should be made in the budget of grants and experiments for promoting **industries in the Punjab**. The Lieutenant-Governor (Sir Michael O'Dwyer) expressed the sympathy of the Government with the idea underlying the resolution. He suggested, however, that the Council should consider the conditions necessary to the promotion of industry. There were three essentials, coal, iron and earth oil. In the past Government had started a coal mine in the province: the coal, however, was found to be of poor quality. As regards iron, the province had not much to hope for. With reference to earth oil, however, there had recently been discoveries of oil in the North Punjab. Prospecting licenses had been taken out by people from Burma and India. It was hoped that these licenses would soon be exchanged for mining licenses and that with the discovery of oil in workable quantities the fuel difficulty might be solved. His Honour would be glad to see capital within the province devoted to the development of this oil industry. There were two industries in the Punjab which might be termed flourishing, and they were weaving and glass manufacture. The Government must have practical proof of the demand for the development of industries. If sound proposals were put forward they would be supported to a greater extent than the Rs. 40,000 already provided, notwithstanding the present financial

stringency and even should it mean re-appropriation from other sources. The resolution was withdrawn.

At the same meeting Mr. Lumsden introduced the **District Boards Bill** the object of which was to enable District Boards to impose a special tax, for promoting the construction or development of tramways or railways and to give the Boards power to impose taxation for that purpose. Colonel Hlendley presented the report of the Select Committee on the bill for **Registration of Medical Practitioners in the Punjab** which, after some discussion and unimportant amendment, was duly passed.

At the meeting held in April, Sardar Gajjan Singh introduced a bill to prevent the smoking of tobacco by children and young persons. On the motion of R. B. Ram Sarn Dass the Council passed a resolution appreciatory of the services rendered by the late Viceroy with special reference to the proposal to establish a High Court in the Punjab and to the enlargement of the Local Legislative Council. The **Budget** was then discussed and generally approved. Sir Michael O'Dwyer in closing the debate paid a particular tribute to the work of the police. He announced that the sanction of the Secretary of State had been received to the proposals for raising the rates of pay of the police constables and head constables as from the 1st April and added that the recognition had come at a time when the police as a body had earned the gratitude of the Province by the vigour and success with which they had coped with the exceptionally difficult conditions of the last two years. That success was due mainly to their being able more and more to secure the confidence and enlist the active co-operation of the people. Turning to the economic situation His Honour said that owing to poor harvests in the province the surplus wheat available for export was very much smaller than in past years. In regard to the political situation the disorders caused by the returned revolutionaries and their adherents in the Central Punjab and by bands of dacoits in the South West were passing and sporadic outbreaks with which the people as a whole had no sympathy. Those disorders were soon repressed by the limited efforts of the administration and the people. Most of those who were actively associated with the anarchist movement had been brought to justice, and met their deserts. The Special Tribunal which dealt with the two great cases known as the Lahore Conspiracies and their subsidiary ramifications had finished their arduous labours extending over nearly a year. The revolutionary campaign, in pursuance of the general conspiracy to subvert His Majesty's Government, had been responsible for 16 dacoities of which three were accompanied by murder and for the murder of 12 persons, nearly all of whom were either servants of Government or had shown themselves active in supporting the administration. In every case but two out of a total of 24 the offenders have been brought to justice and the authority of the law vindicated. Of 286 persons tried before the ordinary or special tribunals, 108 have been discharged or acquitted, 36 have been sentenced to death, 88 to transportation, 54 to various



terms of imprisonment. Apart from those directly implicated in the revolutionary movement a considerable number of returned emigrants had been dealt with under the Ingress Ordinance. Out of some 6,000 the total number arrested was 202. Of these 39 were dealt with for conspiracy or other cognate cases, 117 had been released, in some cases subject to security or restriction to their villages, while 134 were still interned. His Honour acknowledged the great assistance Government had received from leading Sikh gentlemen in several districts in dealing with these cases. In regard to the part played by the province in the War, His Honour pointed out that over half the strength of the combatant Indian Army was drawn from the Punjab. From the beginning of the War to date the Punjab had added 70,000 recruits to the Army. The generosity of the ruling chiefs and people of the province had enabled him on behalf of the Punjab to offer to H. M. the King Emperor a fleet of 43 fighting aeroplanes costing nearly fifteen lakhs. That offer had been accepted and was another proof of the sacrifices that the Punjab had made in the cause of Empire.

In welcoming the new and enlarged Council at its first meeting in June the Lieutenant-Governor announced the terms of the King-Emperor's gracious message accepting the fleet of aeroplanes subscribed by the Chiefs and peoples of the Punjab and presented to His Majesty through His Excellency the Commander-in-Chief. At their meeting in September the Council received from Mr. Lumsden the Select Committee's report on the Punjab District Boards Amendment Bill. In moving its withdrawal, Mr. Lumsden gave a brief history of the Bill, which, he said, had its origin in the

recommendations of the Decentralisation Commission, which were based not on theory but on facts. Before the Bill was introduced in the Council the proposals were submitted to the District Boards and District Authorities. The Bill was permissive, hedged in with safeguards and would confer benefits on the administration of District Boards, but as the unanimous non-official opinion on the Select Committee was against the Bill, Government would not proceed with it. The Bill was withdrawn. His Honour the Lieutenant-Governor making the usual review of the general situation in the Punjab, said that affairs were satisfactory. The monsoon had fulfilled the highest expectations of abundant fodder and copious harvests. The province was to be congratulated on the almost total disappearance of plague and the political atmosphere was clearer than at any time during his term of Office. Enquiries were being made at the instance of Government as to the expediency of extending the elective system in the 30 municipal towns where it did not at present exist; difficulty in extending local self-government was mainly one of finance. In most of these small towns people do not desire further measures of local self-government beyond those they already enjoy if they entail pecuniary sacrifices. In view of the fact that the strength of the Council had recently been raised by four members, three elected and one nominated, it had been decided to raise the number of non-official members on the Budget Committee from three to five, the number of officials being similarly raised. His Honour laid strong emphasis on the determination of Government to cleanse the public services from bribery and extortion and concluded with a brief summary of the progress of the War to date.

## Burma Legislative Council.

The output of new bills was again small during the year 1916. The only measures actually passed into law were the Burma Prohibition of Inoculation and Licensing of Vaccinators Amendment Bill, 1916, and the Burma Ferries Amendment Act, 1916. The object of the latter bill was to remedy a defect in drafting by which unauthorised persons were enabled to encroach with impunity upon the rights of local authorities and lessees of ferries. The former puts a stop to certain disgusting methods for the production of small-pox, which do not fall strictly under the meaning of the term inoculation. The prohibition extends only to areas notified by the Local Government, within which adequate provision for vaccination has been made.

Certain other measures were however so far advanced during the year that they are expected to become law at the next meeting of the Council on the 15th of January 1917. The Burma

Excise Bill, 1916, enacts more stringent regulations to prevent the spread of the cocaine habit by limiting facilities for the cultivation of the drug and the sale of hypodermic syringes. It also extends the powers of Government in controlling the import, export and transport of excisable articles, prohibits the employment of persons under sixteen on premises licensed for the sale of foreign liquor for consumption on the premises, and prohibits the employment of women on such premises except with the previous permission in writing of the Excise Commissioner. Objection has been made to this exception by certain religious and temperance bodies but it is intended solely to meet any temporary exceptional circumstances in which unnecessary hardship would arise from the strict enforcement of the prohibition.

The Burma Salt Bill, 1916, is merely a consolidation bill embodying in the Act the whole of

the law relating to the local manufacture of salt. The Burma Water Hyacinth Bill, 1916, declares that the presence of the plant in the Province is a public nuisance and enacts measures for its eradication. The Hon. Mr. Keith in introducing the Bill on the 25th of November said:— "The object of the Bill is to make possible the eradication of the plant known as the water hyacinth. The Hon'ble Members of this Council are doubtless familiar with the appearance of this plant and its beautiful flower; a picture of it faces the first page of the small green pamphlet which has been placed before each member. I have not been able to discover for how many years the plant has been known in Burma, it is only during the last three or four years, however, that it has become a pest. It is now found all over the Province, and it has spread with alarming rapidity in the creeks and other water-ways of Lower Burma, where it forms a serious impediment to navigation. The need for Government action towards its suppression was first brought to notice by the Commissioner of the Irrawaddy Division in August 1913, since then, annual efforts have been made in many Lower Burma Districts with the concerted labour of the villagers to get rid of the plant; and the instructions contained in the little green pamphlet were drawn up for the guidance of officers engaged in organizing these efforts. The effect of these efforts has, however, been purely temporary. To achieve lasting results, it is essential that every vestige of the plant shall be destroyed; and for this purpose it is necessary to secure the co-operation of every person in the Province. The Bill, therefore, prohibits the possession of the water hyacinth, and requires every owner or occupier of land to destroy any water hyacinth growing in or on any place belonging to or occupied by him. It empowers Government to punish those who neglect this duty and to carry out the work at their expense. It declares the presence of the plant in the Province a public nuisance. The object of the last provision is to impose a legal obligation on village headmen and villagers and on ward headmen and the residents of towns to co-operate in the task of destroying the plant. If the Bill passes into law, it will be necessary to entrust to one or more officers the special duty of organizing the campaign for the destruction of the plant. Special establishments will probably be necessary to deal with large sheets of water where the task of eradication is beyond the powers of the inhabitants of the village tracts into which they fall." The Legislative Council can hardly be charged with undue haste. The Water Hyacinth Bill was declared to be urgent in 1914 and the Excise Bill has travelled between Simla and Rangoon for the past five years.

At the first meeting of the Council on March 17th Sir Harcourt Butler presided for the first time since his arrival in Burma. In his opening speech His Honor invited the attention of the Council to the opportunities for town-planning offered to them in Rangoon, which was in course of reconstruction, pointing out that this was the only great city in India that had been laid out on a scientific plan at the beginning. He was impressed with the backwardness of communications and referred to the recent

constitution of an Advisory Committee for roads and communications on which non-official opinion was strongly represented.

The Hon. Mr. Keith presented the revised financial statement and the budget estimates for the current year. The completed accounts for the year 1914-15, which included eight months of war, showed a reduction in revenue of 80 lakhs and in expenditure of 32 lakhs below the original estimates. The chief loss in revenue was from forests. There is no market for other timber than teak and the price has fallen owing to the lack of facilities for export. The estimated forest revenue for 1914-15 was 118 lakhs, the actual 97 lakhs. The revised estimate for 1916-17 was 94.6 lakhs. The reduction of 32 lakhs in total expenditure for 1914-15 was obtained only by sacrificing all new projects. Except under the head of Forests and Minor Irrigation works the expected recovery took place and the revised estimates of land revenue, 290.62 lakhs, was little more than half a lakh below the original estimate. The Budget for 1915-16 provided for 568.42 lakhs of revenue, the revised estimates 549.11 lakhs. Expenditure in the Budget was estimated at 582 lakhs; the revised estimates were 572½ lakhs. The Budget for 1917-18 showed an estimated income of 559 lakhs and expenditure of 572 lakhs. Moderate estimates of income had been made under every head. Provision was made for a further decline in forest revenue and the estimated increase in Land Revenue was only two lakhs. The increased expenditure under most heads was merely a return to the standard of 1911-15 but it had been found necessary to allow for an increase of 5½ lakhs in expenditure on the Police above the figures for that year. Public Works expenditure included a grant of three lakhs to the Tavoy and Mergui District Cess Funds for the construction of roads to facilitate the working of wolfram. An even larger sum would have been spent on the same objects during the current year 1916-17.

At the meeting on March 29th, the Hon. Mr. Keith then presented the sanctioned Budget Estimates for the year 1916-17. As the result of the conclusion of an important contract by the Forest Department the estimated Forest Revenue was raised from 94.6 to 95.8 lakhs, and it was proposed therefore to spend an additional sum of about two lakhs on improved communications. A discussion on the possibility of improving cattle in Burma by Co-operative stock-breeding was initiated by the Hon. Mr. Goodliffe, and a resolution was carried recommending the appointment of a special committee of inquiry. At the meeting on March 30th the Budget was discussed. The Hon. Mr. Hoseni emphasised the need for improvement in communications and the fostering of local industries. He mentioned the fair held annually at Madras in the People's Park and the industrial exhibition attached thereto. He suggested an exhibition of a similar kind in Burma. His suggestion was adopted at the Arts and Crafts Exhibition opened by the Viceroy on the 4th of December, which included exhibits by the Forest Department, Agricultural Department, Amarapura Weaving School and many private firms engaged in developing the natural resources of the province.

The Hon. Mr. Cowjee pointed out the great advantages under which Burma laboured owing to the want of railway communication with India, and showed how a railway would facilitate the immigration of the labour needed by the province for its development. The Hon. Mr. Chia Tsong discussed certain alleged defects in the Education Code and pressed for the teaching English reading to children in the lowest standards of Anglo-Vernacular schools. The Hon. Mr. Webb in reply quoted departmental circulars showing that the speaker's demands were based upon a misapprehension of what was actually being done. The Hon. Mr. Keith pro-

posed to see what could be done at the next Provincial Arts and Crafts Exhibition to carry out Mr. Hosen's suggestion. The appointment of a Director of Industries, he said, for Burma, following the example of Madras, had been considered but found at present impracticable on the ground of expense. He referred to the success already achieved by the weaving school under a trained expert at Amarapura, at which scholarships were provided to enable skilled weavers to attend courses of instruction in improved methods, and which sent out travelling instructors to teach those who could not attend the school.

## Bihar and Orissa Legislative Council.

The Bihar and Orissa Legislative Council met five times during the year 1916, while the Finance Committee of the Council met once on January 19th to examine the Provincial budget for 1916-17 and to select the projects upon which a sum of Rs. 5,29,000, which had not been earmarked for obligatory charges, should be spent. The third meeting of the year which was held at the end of March, marked the end of the period of office of the members who had formed the first Legislative Council of the Province, while at the meeting held in August the principal business was the swearing in of the members of the new Council.

There was practically no legislative business before the Council during the year. At the first meeting the report of the select committee appointed to consider the Bihar and Orissa Decentralisation Bill was brought up and the Bill, the object of which was to delegate to the Board of Revenue or other authorities certain powers previously reserved by statute to the Government or the Board, was passed without discussion. At the August meeting the President indicated that of several new legislative projects under contemplation four were likely to be taken up at no distant date, namely (1) a new bill to take the place in Bihar and Orissa of the Bengal Municipal Act of 1884, (2) a bill to amend the Local Self Government Act of 1885, (3) a bill to repeal and re-enact the Bengal General Clauses Act of 1899, and (4), a bill to repeal and re-enact the Bengal Mining Settlement Act of 1912. Of these the first two measures are likely to excite a good deal of interest. The Old Municipal Act in particular, framed as it was before motor cars for instance were thought of, is out of date in many particulars so that the changes likely to be introduced will be of considerable importance. None of the bills was however brought before the Council before the end of the year and the only item of legislative business disposed of by the new Council was the passing of a small amendment to the rules of procedure, whereby two months' notice instead of five days has to be given by a private member

before he may introduce a Bill. The change was necessary to enable draft Bills to be properly examined and was not opposed.

As regards financial business the recommendations of the Finance Committee as to the way in which the sum left to their discretion should be spent were as usual accepted *in toto* by the Government. The budget for 1916-17 was necessarily framed on very economical lines, the provision of Civil Works, for instance, being cut down from Rs. 81,32,000 in the previous year to Rs. 58,92,000. At the first meeting in March the different heads in the budget were explained by the heads of the departments concerned or, where the head of the department was not a member of the Council, by the Member in charge. Three resolutions were moved (1) to divert a sum of Rs. 40,000 earmarked for an improvement in the pay of constables to the improvement of the Collar in the Province, (2) to spend Rs. 50,000 on improving the Sdar hospitals in the Province instead of on a central electric light installation for the new Capital, and (3) to cut down the education budget by a lakh and to use this money to establish a Station for Sugar Research. As almost invariably happens on these occasions the Resolutions were withdrawn after the Government had shown that the economies proposed could not be effected without disadvantage or that the new schemes suggested were not so far advanced as to make it worth while to provide for them during the ensuing year. This discussion on the budget at the last meeting in March served to provide most of the non-official members with an opportunity for showing the subjects in which they or their constituents were principally interested, no less than twelve members speaking and their remarks ranging over a very wide variety of topics. In response to a request from one of the speakers it was agreed that in future answers to the questions to be asked at each meeting should be laid on the table half an hour before the proceedings commenced, so that there might be an opportunity of asking supplementary questions.

Four Resolutions were moved during the year apart from those connected with the budget. The first related to the housing of casual labour on the Coal Fields and was withdrawn on an assurance being given that an enquiry would be made into the subject. The second, a resolution for the appointment of a committee to enquire into the causes of the periodically recurring floods in North Behar and to suggest remedies therefor, was postponed by the mover as the Commissioner of the Division had already taken action in the matter by calling a joint meeting of the Embankment Committees of the three districts concerned. Another resolution urged the cancellation of a circular which the Government had issued stating that in future no Union Committee should be created under the Local Self-Government Act without the issue of a preliminary notification of the intention to create it and that no Union Committee was to be constituted unless a substantial majority of the residents of the area desired it. It was urged that the latter clause in particular unduly fettered the discretion of the District Boards and was likely to hamper the improvement of rural sanitation, for sanitary measures like vaccination, have often in backward districts to be carried out against the wishes of the persons concerned. The Government in this case suggested an amendment that only the

second half of the circular should be cancelled and, this being accepted, the resolution was carried unanimously. The fourth resolution proposed an increase in the number of free studentships in Secondary Schools to 10 per cent. and was accepted by the Government with the proviso that effect should not be given to it till it was possible to make the necessary allotment from Provincial revenues to cover the expenditure involved.

The number of questions asked amounted to more than 120, of which two-thirds were put at the meeting in December. As usual they covered a wide range of subjects, the favourite ones being education and the proportion of appointments given to natives of the Province in the various branches of the public service. Some of the speakers asked for such elaborate statements that the Government had to decline to supply them in view of the labour that would be involved in their compilation, while in other cases advantage was taken of the questions to make pronouncements on matters of general interest such as the damage done by the autumn floods. A good deal of valuable information was also elicited on the progress of municipal improvement schemes, on the policy of Government in the matter of primary education, and on many other important topics.

## Madras Legislative Council.

The proceedings of the Council began with a session in the month of March, 1916, which was solely devoted to a consideration of the Revised Financial Statement for the year 1916-17. Several resolutions were brought forward by non-official members of the Council proposing certain alterations with the object of securing economy in certain departments so as to enable the Government to expend more on objects like education, sanitation, etc., but most of the resolutions could not be accepted by the Government, either because they were impracticable or because more money could not be found at present or because it was impossible to retrench expenditure in the manner suggested by the non-official members.

The Honourable Mr. M. Ramchandra Rao moved that a representation should be made to the Government of India that an assignment should be made to the Madras Presidency to meet the growth of expenditure in the Police, but it was pointed out by the Honourable Sir Harold Stuart in a very effective speech that there was really no case for such a grant and that there was not the slightest chance of getting more money from the Government of India. There was also a proposal to reduce the amount of expenditure on account of police buildings by one lakh of rupees and devote the same to the opening of new elementary schools in the Presidency. In the discussion of this proposal the non-official members gratefully recognised the progressive policy that was adopted by the Madras Government with regard to educational expenditure but they thought that more should be done to spread elementary education all over the Presidency. It was pointed out on the official side that the expenditure under this head was as generous as it was possible to be and that it was not possible to find more

money to spend even on such a laudable object. A suggestion to establish two Civil and Mechanical Engineering Schools in the Presidency was also met with a similar reply. The Honourable Mr. Srinivasa Sastri brought forward a proposal to strike out the grant of temporary personal allowances to certain officers of the Indian Educational Service. This proposal was made ostensibly to secure economy in public expenditure, but really to point out the fact that there was absolutely no justification for the grant of this temporary allowance in the case of two or three officers who were already getting between Rs. 1,000 and Rs. 1,500 a month by way of salary. The Government replied that the allowances were granted on the initiative of the Government of India who finding that the deliberations of the Public Services Commission might take time to result in definite action authorised the Madras Government to expend a sum of Rs. 6,000 to improve the conditions of the members of the Indian Educational Service and that as a matter of fact the Madras Government were spending only Rs. 3,600 out of this Rs. 6,000—conduct that could hardly be called extravagant. The resolution on this subject gave rise to considerable discussion and much heated comment. The non-officials complained that this was nothing less than discrimination made between one service and another and that this was an instance in which the finances of the country were being administered in good seasons and bad for the purpose of certain classes only. Eventually the resolution was put to the vote and lost. A suggestion for a small increase of expenditure towards contributions to hospitals and dispensaries was accepted by the Government.

The final budget debate took place in April, 1916, when most of the members official and

non-official, delivered interesting speeches reviewing the budget proposals as a whole, commenting on the past and making suggestions for the future. The speeches on the whole were of a high order and it is gratifying to see non-official members realising more and more the responsibilities attaching to their position and criticising the action of the Government with restraint and moderation even when they feel it incumbent on their part to disapprove of Government action.

There were very few legislative measures that came up for consideration before the Council during the year. A bill to amend the **Madras Civil Courts Acts of 1873** passed through the Council and became law. The object of the Act is to invest District Munsiffs with increased jurisdiction over suits of a value not exceeding Rs. 3,000. Hitherto they could not decide suits whose pecuniary value was over Rs. 2,500. This scheme was found necessary so that the Subordinate and District Judges might be relieved of a portion of their work and this course was found possible because the District Munsiffs as a class have proved themselves to be very efficient and capable judicial officers. Some minor amendments seeking to restrict the application of the Act and attempting to invest the additional jurisdiction only on certain Munsiffs of experience and in particular cases did not meet with the approval of the Government as there were several practical difficulties in their adoption. The bill as it was brought in was therefore passed into law without much discussion. Another small measure seeking to amend the **Presidency Small Cause Courts Act of 1882** and the **City Civil Court Act of 1892** with a view to remove an existing anomaly was also passed into law without discussion. The anomaly was this. Before the Act, suits of a Small Cause nature the value of which is between Rs. 1,000 and Rs. 2,000 might at the option of either party be taken to the High Court, whereas suits over Rs. 2,000 and under Rs. 2,500 must be filed in the City Civil Court. The Act, while it does not deprive the plaintiff's right to go to the High Court, provides that all suits between Rs. 1,000 and Rs. 2,000 may be filed in the City Civil Court itself. A measure of considerable importance affecting **Agency Tracts** in the Madras Presidency was introduced by Mr. Gillman and referred to a Select Committee after some opposition. The object of the Bill is to protect the hill tribes in the agency tracts from getting into the clutches of the Goriyas and other money lending classes, who by lending sums of money to them at exorbitant rates of interest gradually get into their possession the lands belonging to them. The danger of the hill tribes being thus deprived of their entire landed property on account of their ignorance was so great that the Government two years ago had to depute one of their Collectors to examine and report on the condition of the hillmen. His report was received and it bore abundant testimony to the fact that the Khonds were being regularly expropriated by the Sowcars. To prevent this evil the Bill was introduced and its main provisions are that the rate of interest is not to exceed 24 per cent., the total interest is not to exceed the principal, and transfers of lands other than

to the hill tribes are to be made subject to the approval of the officers of the Government. After the Bill comes back from the Select Committee, it will be considered by the Council and there can be little doubt that it would evoke considerable comment and discussion.

During the year under review the Council had to consider innumerable resolutions brought forward by non-official members to achieve some reform or another that they thought essential in the interests of the public. A resolution to the effect that committees of non-official representatives of the Indian community be constituted to inspect **emigrants** at the depots prior to their embarkation was brought forward with the object of mitigating the evils of unscrupulous agents decoying labourers with false promises of wealth. The Government, while not admitting that the evils were so great and wide-spread as was sought to be made out by some of the non-official members, undertook to arrange that non-official gentlemen of respectable position and character should have opportunities of visiting the depots. Another proposal to recruit the **subordinate magistracy** in the Presidency more largely from amongst the legal practitioners did not commend itself to the Government who thought that the existing system gave the people a very efficient and upright class of Sub-Magistrates whose physical training, common sense and practical knowledge of the world may not be possessed by men directly recruited from the bar. The Honourable Mr. Srinivasa Sastri made certain suggestions for the improvement of the condition of aided **Elementary Schools**. The Director of Public Instruction, the Honourable Mr. Stone, who is known to be very keen on educational progress, did not disapprove of much of what was said in this connection but pleaded insufficiency of funds at the present moment. One Honourable Member felt that the power of the Local Government as regards the central administration and construction of railways in the Presidency were unduly crippled by the existence of the Railway Board and he proposed that the **Railway Secretariat** of the Government which was abolished in 1907 or 1908 should be revived and that the Local Government should be empowered to deal with complaints from the travelling public against the railway administration instead of passing them on as at present to the Railway Board and the Agents of the railway administration. The Government replied that they would take such steps as may be possible to secure the enlargement of their powers in this respect.

An interesting discussion arose on the resolution which recommended that the rules for the assignment of **unoccupied lands on darkhast** should be so modified as to afford special facilities to poor persons of the backward classes living in the locality to obtain such lands. This was a large question that would considerably affect the agrarian position in Southern India and so the Government could not in the very nature of things commit themselves on the spur of the moment to any definite view on the subject. The Hon'ble Mr. Cardew invited the members of the Council to express their opinions on the subject so that the Government may in the light of those opinions carefully consider the entire position

at leisure. The suggestion that a Licensing board should be constituted in Madras for determining the location of the liquor shops in the city elicited the information that the Board of Revenue had been called upon to report on the matter and that as soon as their reply was received the Government would examine the question carefully. The necessity for the spread of medical education in the rural areas of the presidency was one of the subjects discussed in the shape of a resolution. The Government were as enthusiastic as any one else in this matter but they could not in view of its impracticability accept the suggestion that medical instruction should be given in the vernaculars. The Hon'ble Mr. Kesava Pillai came up with his special subject of Jail reform and recommended that prisoners sent to jail for not furnishing security under the Security Chapter of the Criminal Procedure Code should be confined apart from those convicted for offences under the Penal Code and he made a strong case for such differential treatment but on its being pointed out that even the law at present contained sufficient provision to allow of this object being carried out the resolution was withdrawn. The Government opposed a proposal to appoint a special officer to reorganise the Revenue Department with a view to increase its efficiency and reduce the expenditure but promised sympathetic consideration to all practical proposals to improve the land revenue administration. There was no disagreement between the Government and the non-official representatives on the necessity of certain Government officials of a particular grade being trained to qualify themselves for taking charge of town planning and village extension schemes. Considerable discussion centered round the proposal to appoint at least one Indian as a member of the **Board of Revenue**, the Government pointed out that the appointment to the Board of Revenue was primarily reserved to the Members of the Indian Civil Service, that though there was power in exceptional circumstances to appoint outsiders, fitness and not mere seniority was the determining factor. This position was hardly acceptable to the Members of the Opposition several of whom pointed out that the Government in the present attitude it took up was really going back upon the solemn declaration made in 1910 by Sir Murray Hawick. As a sort of compromise it was agreed that when a suitable opportunity occurs one member's place in the Board of Revenue should be filled up by an Indian. An attempt to increase the elective strength in all local bodies to a definite proportion was resisted by the Government on the ground that progress in the direction suggested was quite rapid within recent years and that it was unwise to run too fast. Sir Sivaswami Iyer however gave the assurance that if any local body asked for an increase in its elective strength the Government would strive their best to meet the request.

There was a well-informed debate on the resolution of the Honourable Mr. M. Ramachandra Rao proposing the appointment of a mixed committee of officials and non-officials to consider and report on the lines on which legislation should be undertaken so as to secure more efficient control and administration of

**Public Charities** in the Presidency. The Government admitted the existence of grave abuses but urged that before considering the question of legislation an accurate list should be prepared for each District of the Public Endowments therein. Rules were being framed under Regulation VII of 1817 for the guidance of Collectors and their subordinates and proposals had been called for regarding the constitution of advisory committee to report upon the management of such endowments. If the provisions of the existing law were found wanting then it would be time enough to think of further legislation. The representative of the Nattukottai Chetti community, which is responsible for a large number of efficiently managed charitable institutions all over the Presidency, objected to the very idea of outside control of their charities. The discussion was wound up with an assurance from the Government that they would take early steps to enquire into the condition of the existing public charities.

Another resolution pointed out the necessity for re-organising the **Judicial Branch of the Provincial Service**, and revising the scale of salaries of the members thereof in accordance with certain former recommendations of the High Court. The only obstacle to these recommendations being given effect to was the unsatisfactory financial position. Further, the publication of the report of the Public Services Commission had to be awaited before definite steps could be taken. Anyhow, the Government promised to take the necessary steps to carry out the recommendations as early as possible. With the view of enabling the District Judges to devote more time to the trial of civil suits, a proposal was brought up to appoint a large number of Subordinate Judges as Additional or Assistant Sessions Judges but this proposal was not approved by the Government and it fell through. An Honourable Member drew attention to the evils arising from the system of holding the subordinate revenue, police and forest officers responsible for the supplies to their superior officers when on tour. Unfortunately, the Hon'ble Member instead of advancing general arguments in favour of his position went into the details of specific instances and this was considered by the Government as an unworthy personal attack on individual officers of the Government. In consequence of this misunderstanding the discussion became heated but it was eventually agreed that superior officers like the Deputy Collectors, Tahasildars, etc., should not be called on to attend to the supplies.

There were various other resolutions dealt with and discussed and they are not noticed here as they are of purely local interest. The foregoing account would show that the conferment on non-official members of the power to move resolutions is a forward step of great importance not only as it enables them to draw the attention of the Government to the existence of evils and the necessity for remedying them but also to make valuable suggestions for progressive reform in several directions. It must be said to the credit of the non-official members that, on the whole, they have used their power sparingly, wisely and well.

## The Public Trustee.

The Public Trustee of England is a Government Official created by Statute (Public Trustee Act, 1906), whereby the State acts as an executor or as a trustee under Wills, and as a trustee under Settlements, whether these instruments are new or old, and in other offices of an analogous character.

The office has been a great success; in the seven years that it has been open the value of the trusts in course of administration have amounted, in round figures, to £50,000,000, while the estimated value of Wills lodged in the Department which have yet to mature is put at some £59,000,000, showing a total value of business of all kinds negotiated at £110,000,000.

**Fees chargeable.**—The office is now entirely self-supporting and is no charge upon the tax-payer. A provision of the Statute declares that the Office is to make no profit but to charge only such fees as may provide the working expenses and constitute a reserve fund against the liabilities assumed by the State for breach of trust. In accordance with this mutual principle the fees have already been reduced from their original scale, and the cash surplus of fees over expenses, regarded as the nucleus of a reserve fund for all contingencies, is now £14,585.

The main fees are of two kinds—a fee on capital and a fee on income. The fees on capital are taken in two instalments—an instalment of half taken at the beginning, and another instalment of half taken at the end of a trust—each instalment being calculated at the following rates:—

On the first £1,000, fifteen shillings per cent.

On the excess of £1,000 to £20,000, five shillings per cent.

On the excess of £20,000 to £50,000, two shillings and six pence per cent.

On the excess of £50,000, one shilling and three pence per cent. The **Fee on income** is one per cent. *if*, as is usual, the income be paid direct from its source to the person entitled, on any income in excess of £2,000 a year the fee is only  $\frac{1}{2}$  per cent. Where the income is paid through the Department then the fee is two per cent. up to £500 a year, and one per cent. on any excess of £500 a year, and  $\frac{1}{2}$  per cent. on income in excess of £2,000 a year. The fee on investment is  $\frac{1}{2}$  per cent.: the Public Trustee, out of this fee, paying the brokerage. There is power to vary these fees to meet the peculiar circumstances of special cases; but owing to the low range of the fees, and their mutual character the power of reduction is but seldom exercised, except perhaps in the case of large trusts.

The Department has been organised upon lines followed by commercial organisations. Forms are avoided wherever possible, the methods of the Office prescribing prompt attention to all matters within the day.

The particulars of any trust in which it is desired that the Public Trustee should act may be brought to his notice by letter or by personal interview, and upon his assent being obtained, his appointment should be effected in the ordinary way as in the case of private trustees. In the case of a Will about to be made, his appointment can be secured by the simple provision "I appoint the Public Trustee of England as the executor and trustee of this my Will."

One of the forms of trusteeship which would appeal to English people residing in India is a scheme known as a "**Declaration of Trust.**" An official pamphlet explains that the Public Trustee's services have been requested by people who, either because of professional or business pre-occupation, or from want of experience in dealing with money matters, or from the disadvantages which might attach to Governmental, professional or business disabilities abroad, are not well placed to select and supervise their investments. It would appear that the services of the Department in this matter were first requisitioned by officers taking up appointments in India; and, following out their request for individual assistance, this scheme of trust came to be devised, and has been found to commend itself to the circumstances of a very large circle of persons similarly disadvantaged. A Declaration of Trust is an **inexpensive form of trusteeship** by virtue of which the owner practically retains full control over his capital. The property is made over to the Public Trustee either in the form of money to be invested or specific securities transferred into his name; and thereupon the Public Trustee executes a short "declaration" setting out that he holds the money invested or the securities in trust for the transferor. The result of this is that income, as it accrues, is paid to the owner or to any beneficiary as he may direct. A wide field of investment is permissible, as the trust provides that the funds may be invested as the owner may from time to time direct. As the pamphlet sets out interest at the rate of at least 4 per cent. is to be looked for under the scheme from investments of a non-speculative character. It should be understood that this form of trusteeship is not analogous to a bank deposit, where the return of the capital at par, given the solvency of the bank, is expected. Investments are selected with the greatest care in consultation with the owner, but it must be understood that the Public Trustee does not accept responsibility for any fluctuation of any of the investments chosen. The fees payable for this scheme of trusteeship, so far as the capital fees are concerned, are half those payable in the case of an ordinary settlement. The other fees are the same as the ordinary fees.

The appointment of the Public Trustee secures certain definite advantages inasmuch as he is by Act of Parliament a Corporation Sole: and thus it is said the Public Trustee never dies, so that the expense of appointment of other Trustees is permanently avoided. His

integrity is guaranteed by the State, while the measure of his success would indicate that he is necessarily experienced and skilled in his duties.

Close personal attention is given by the Public Trustee and his senior officers to the details of every trust; and as regards the work of investment, a large organisation has been set up to give the best consideration not only to the selection of investments but to the duty of keeping them under frequent observation.

An Advisory Committee of men of recognised authority has, in the past year, been appointed by the Lord Chancellor to assist the Public Trustee by a quarterly review of the investments made. In the last Annual Report the Public Trustee speaks of having secured a return of £3-19-4 per cent upon his trustee investments and a return of £4-10-1 per cent upon his non-trustee investments.

The success of the Department would seem to show that there is a widespread public need in England for such an Office, and the energy and efficiency with which the Department has been constituted and conducted has been a great factor in commending it to the public. The State Guarantee is also doubtless a factor of great importance. A statutory rule pro-

vides that strict secrecy shall be observed in respect of all trusts administered in the Department.

The administration is subject to an audit by the Controller and Auditor-General (the Government Auditor), while the internal organisation has been built up upon the principle of a check and counter-check upon the administration.

An important section of the Statute gives the Public Trustee power to direct an audit and investigation of the condition and accounts of any trust.

Officials in India will doubtless tend to make an increasing use of the Department. As a Government Office, its stability will commend itself to them as a medium to safeguard their interests under Wills or Settlements which can be entirely relied upon, and free from the risks and expense attendant upon any other forms of trusteeship.

Further information upon details and copies of the official pamphlet, reports and rules, etc., can be obtained of the official agents to the Department, viz.—Messrs King, Hamilton & Co, Calcutta and in Bombay, Messrs. King, King & Co., whose head office is Messrs Henry S. King & Co., 65, Cornhill, London, E. C.

## THE ADMINISTRATOR-GENERAL.

In India the functions of a Public Trustee are divided in each Province between two officials, the Administrator-General and the Official Trustee.

The office of **Administrator-General** was first constituted by Indian Act VII of 1849. There were several later enactments on the subject, all of which have ceased to be in force. The present law is to be found in Indian Act III of 1913, which contains the following provisions:—There are three Administrators-General in each of the Presidencies of Bengal, Madras, and Bombay. Their combined jurisdiction covers the whole of British India. The Administrator-General is entitled to letters of administration, when granted by a High Court, unless they are granted to the next of kin. In the other Courts he is entitled to letters in preference to a creditor, a legatee other than a universal legatee, or a friend of the deceased.

If any person who is not an Indian Christian, a Hindu, Mohammedan, Persian, Buddhist dies leaving within any Presidency assets exceeding the value of Rs 1,000 and if no person to whom any Court would have jurisdiction to commit administration of such assets has, within one month from his death, applied in such Presidency for probate or letters of administration, the Administrator-General is required to apply for letters of administration. In case of apprehended danger of misappropriation, deterioration, or waste of assets left by the deceased in the towns of Calcutta, Madras and Bombay, the High Courts may direct the Administrator-General to apply for letters of administration. He can also be required to collect and hold assets until a right of succession or administration is determined. Probate and letters of administration granted to an Administrator-

General have effect throughout the Presidency, but the High Court can direct that they have effect throughout one or more of the other Presidencies. A private executor or administrator may with the assent of the Administrator-General transfer the assets of the estate to the Administrator-General. There are provisions in the Act with regard to the revocation of grants and the distribution of assets. When the assets do not exceed Rs 1,000 in value, the Administrator-General may, when no probate or letters of administration have been granted, give a certificate to a person, claiming otherwise than as a creditor to be interested in such assets, entitling him to receive the assets. There is also power in certain events to give such certificate to a creditor. There is a further power to send the residue of the assets to the country of domicile of the deceased. The Government of India is required by the Act to make good all sums for which the Administrator-General would be personally liable if he had been a private administrator, except where the Administrator-General and his officers have in no way contributed to the liability.

**Fees** both on capital and on income are payable out of the estates taken charge of by the Administrator-General. The fees on capital vary from 3 per cent on the gross value in the case of small estates to 2 per cent. in the case of large estates. The fees on income vary in the case of moveable property from 2 per cent. to 3 per cent., and in the case of immovable property from 3 per cent to 5 per cent. When the Court has directed the Administrator-General to collect and hold the assets a fee of 1 per cent. on the value of the assets taken possession of, collected, realised, or sold is payable. A small fee is also payable in cases where the



## The Official Trustee.

**Administrator-General grants a certificate.** The Administrator has power to reduce the fees to one-half.

**Official Trustee**—The office of Official Trustee dates from the year 1843. By Indian Act XVII of that year the Supreme Court had power to appoint the Registrar or other officer of the Court to be a trustee, where there was no trustee willing to act. Act XVII of 1843 was repealed by Act XII of 1861, which was in its turn repealed by Act II of 1913, which contains the present law on the subject. There are three Official Trustees. The Official Trustee of Bengal has powers in the greater part of India. The powers of the Official Trustee of Bombay extend to the Bombay Presidency and the Province of British Baluchistan, those of the Official Trustee of Madras extend to the Madras Presidency and the Province of Coorg. The Government can appoint a deputy Official Trustee.

An Official Trustee can (a) act as an ordinary trustee, (b) be appointed trustee by a Court of competent jurisdiction. He has (except as otherwise provided) the same powers, duties,

and liabilities as ordinary trustees. He may decline any trust. He may not accept any trust under any composition or scheme of arrangement for the benefit of creditors, nor of any estate known or believed by him to be insolvent. He cannot accept a trust for a religious purpose or for the management or carrying on of any business. He cannot administer the estate of a deceased person unless he be sole executor and sole trustee under the will. He cannot be appointed trustee along with any other person. With his consent he may be appointed trustee in the instrument making the trust, and he may accept a trust contained in a will. When property is subject to a trust, and there is no trustee within the jurisdiction willing or capable to act, the High Court may appoint the Official Trustee as trustee. He may also be appointed a trustee by the surviving or continuing trustees of a trust, and all persons beneficially interested therein.

As in the case of an Administrator-General the Government of India is responsible for the acts or defaults of an Official Trustee. Fees are payable at rates fixed by the Government.

## PROVING OF WILLS.

In British India if a person has been appointed executor of the will of a deceased person, it is always advisable to prove the will as early as possible. If the will is in a vernacular it has to be officially translated into English. A petition is then prepared praying for the grant of probate of the will. All the property left by the deceased has to be disclosed in a schedule to be annexed to the petition. The values of immoveable properties are usually assessed at 10½ years' purchase on the net Municipal assessment for estate under Rs 10,000 the probate duty payable is 2%, between Rs 10,000 and Rs 50,000 the duty payable is 2½%. Over 50,000 rupees the duty payable is 3%. In determining the amount of the value of the estate for the purposes of probate duty the following items are allowed to be deducted:—

- 1 Debts left by the deceased including mortgage encumbrances.

- 2 The amount of funeral expenses.
- 3 Property held by the deceased in trust and not beneficially or with general power to confer a beneficial interest.

The particulars of all these items have to be stated in a separate schedule. It is the practice of the High Court to send a copy of these schedules to the Revenue authorities and if the properties, particularly immoveable properties, have not been properly valued, the Revenue department require the petition to be amended accordingly. In certain cases the Court then requires citations to be published and served on such persons as the Court thinks are interested in the question of the grant of probate. If no objection is lodged by any person so interested within 14 days after the publication or service of citation and if the will is shown to have been properly executed and the petitioner entitled to probate, probate is ordered to be granted.

# Freemasonry.

In an Institution so universal as Freemasonry the growth of that body in any particular part of the world is usually similar in all respects to the development in other parts. When Freemasonry was first established in Bombay and became strong enough to have its own Provincial Grand Lodge, the Grand Master of English Freemasons appointed James Todd, a Lieutenant of Police, as the first Provincial Grand Master in 1764. This office he held until 1798, when the Provincial Grand Lodge seems to have gone into abeyance. A revival apparently set in in 1833, and Lodge Orion in the West was founded at Poona. This was followed in 1844 by Lodge St. Andrews at Kamptee and in 1848 by Lodge St. George in Bombay. In 1861 the Provincial Grand Lodge was revived and George Taylor was appointed P. G. M.

In 1870 a fresh warrant was issued by which the Provincial Grand Lodge of Bombay was altered to District Grand Lodge with James Gibbs as D. G. M. The next D. G. M. was Edward Tyrrell Leith who took charge in 1879, and he was followed in 1887 by H. R. H. the Duke of Connaught. The remainder of the District Grand Masters were H. E. Lord Sandhurst 1895-1899, H. E. Lord Northcote 1900-1902, Hon. Sir Lawrence Jenkins 1903-1907 and G. Owen W. Dunn 1908-1911. The present D. G. M. being W. Alban Haig-Brown who was appointed in 1912.

Under the skilful management of these illustrious men the District has grown until now there are under the District Grand Lodge of Bombay 40 Lodges with a total membership of over 2,000.

At the same time the Royal Arch and Mark degrees have also prospered and there are 18 Chapters with a total membership of over 600 and 11 Mark Lodges totalling over 300.

## DISTRICT GRAND LODGE E. C.

List of Principal Officers, 1916.

### BENGAL.

- R. W. District Grand Master*, Right Hon. Baron Carmichael of Skirling, G.C.I.E., K.C.M.G.  
*Deputy District Grand Master*, Hon. Sir James S. Meston, K.C.I.D.  
*District Senior Grand Warden*, The Hon'ble Kiran Chunder De, C.I.E.  
*District Junior Grand Warden*, Eric Studd.  
*District Grand Secretary*, J. A. Dolton, 19, Park Street, Calcutta.

### BOMBAY.

- R. W. District Grand Master*, W. A. Haig-Brown, J.P.  
*Deputy District Grand Master*, C. E. Robinson, J.P., P.G.D. (Eng).  
*District Senior Warden*, F. W. Cresswell.  
*District Junior Grand Warden*, Major W. M. P. Wood.  
*District Grand Secretary*, J. F. Pennock, V.D., P.A.G.D.O. (Eng.) King's Building, Fort, Bombay.

### MADRAS.

- R. W. District Grand Master*, Hon. Mr. M. E. Buckley.  
*Deputy District Grand Master*, C. J. [redacted], P. G. D. (Eng).  
*District Senior Grand Warden*, V. T. [redacted] Pillai  
*District Junior Grand Warden*, Brig.-Gen. H. F. Lock.  
*District Grand Secretary*, J. H. B. Brougham, Mount Road, Madras.

### PUNJAB.

- R. W. District Grand Master*, Col. Henry T. Pease, C.I.E., P.G.D. (Eng).  
*Deputy District Grand Master*, Vacant.  
*District Grand Secretary*, David E. Johnston, Freemasons' Hall, Lahore.

### RUSSIA.

- R. W. District Grand Master*, The Hon. Mr. Justice L. W. Ormond.  
*Deputy District Grand Master*, Col. H. W. Senior  
*District Senior Grand Warden*, W. Kendall.  
*District Junior Grand Warden*, G. H. Evans.  
*District Grand Secretary*, A. Blake, Winchester House, Rangoon.

## GRAND LODGE OF ALL SCOTTISH FREEMASONRY IN INDIA.

In-tallation—November (St. Andrew's Day).

COMMUNICATION—4th Saturday, in January, April, July, and October.

PLACE OF MEETING—Freemasons' Hall, Ravelin Street, Bombay.

- Grand Master*, The Hon'ble Mr. Justice F. C. O. Beaman, I.C.S.  
*Grand Master Deputy*, The Hon'ble Mr. P. R. Cadell, C.I.E., I.C.S.  
*Substitute Grand Master*, Abdeali M. Kaji.  
*Grand Superintendent of Central India*, Col. F. W. P. Macdonald.

*Grand Superintendent of Eastern India*, W. R. Gourlay, I.C.S.

- Senior Grand Warden*, A. M. Green, I.C.S.  
*Do. do. do.*, B. R. Herman.  
*Junior Grand Warden*, Pramjee B. Jeejeebhoy.  
*Do. do. do.*, J. F. Jensen.

*G. Secretary*—ARTHUR W. WISE,  
 Elphinstone Building, Muzrab Road, Fort, Bombay.

## BENGAL MASONIC ASSOCIATION.

For Educating Children of Indigent Freemasons.

*President*—The Right Hon'ble Baron Carmichael of Skirling, G.C.I.E., K.C.M.G., *District Grand Master*.

This Association is supported by capitation assessments from the Lodges in the District of Bengal and by voluntary contributions.

1. A donation of Rs. 500 made in one or more payments of not less than Rs. 50 each constitutes the donor a *Vice-President for Life* with the privilege of five votes.

2. A donation of Rs. 100 constitutes the donor a *Governor for Life*, with the privilege of one vote and one vote for each additional donation of Rs. 100.

3. A subscription of Rs. 16 per annum entitles the subscriber to one vote for the year and an extra vote for every additional Rs. 16.

4. The conditions of the above are the same whether the donor or subscriber be an individual or a Lodge, Chapter, or any other society.

5. A general meeting of subscribers is held twice in the year, at Freemasons' Hall, Calcutta, 19, Park Street.

6. The general conduct of the affairs of the Association is entrusted to a Committee composed of the President, Treasurer, and Secretary, and of five Members to be elected at the February Half-yearly General Meeting.

7. The funds of the Association are devoted solely to the board and education of children.

8. Children are admitted into the Association at the age of seven years and continue therein till they have attained the age of seventeen years.

*This rule applies equally to children of both sexes without any distinction of religious denominations.*

9. Elections take place at each General Meeting of Subscribers according to the number of vacancies and capabilities of the fund.

10. No child is eligible to be placed on the List of Candidates unless his father has been a Registered Mason for five years and Subscribing Member of some Lodge for at least three years of that period.

*Subscriptions and donations are received by the District Grand Secretary and by the Secretary of the Association (Herbert E. Kent, Freemasons' Hall, 19, Park Street), W. J. Bradshaw, Hon. Treasurer, and Herbert E. Kent, Secretary.*

#### BENGAL MASONIC FUND OF BENEVOLENCE.

##### GRAND COMMITTEE.

*President.*—The Right Honourable Baron Carmichael of Skirling, G.C.I.F., K.C.M.G., *District Grand Master*

The Hon'ble Sir James Meston, K.C.I.E., *Deputy District Grand Master.*

C. D. Stewart, P.D.G.W.

S. A. Fairweather, *Deputy Grand Treasurer.*

J. A. Dolton, *Deputy Grand Secretary.*

H. E. Kent, *Deputy A. Grand Secretary.*

#### SCOTTISH MASONIC FUND OF BENEVOLENCE.

For the purpose of affording temporary relief to indigent Freemasons and their families.

*Grand Secretary*—Arthur W. Wise, Elphinstone Building, Murzban Road, Fort, Bombay.

#### THE SCOTTISH MASONIC BENEVOLENT ASSOCIATION IN INDIA.

(a) For the purpose of granting Annuities to old and destitute Freemasons and their widows.

(b) Granting allowances towards the maintenance and education of the children of deceased or indigent Freemasons.

C. D. Furdonjee, *Honorary Secretary and Treasurer.*

J. C. Mistic, *Honorary Assistant Secretary*, Elphinstone Building Murzban Road, Fort, Bombay.

#### THE SIND MASONIC BENEVOLENT ASSOCIATION.

##### Patron.

Right Wor. Bro. H. E. the Right Hon'ble Lord Lamington, G.C.M.G., G.C.I.E., *Late Grand Master of A. S. F., India, and Governor of Bombay.*

C. H. Chetham, *President, Secretary*.—Framroze E. Punthakey, Victoria Street, Predy Quarter, Karachi.

#### THE BOMBAY MASONIC ASSOCIATION.

For Educating, Clothing and Maintaining the Children of Indigent and Deceased Freemasons.

Subscriptions and donations are received by the Hon Sec, J. F. Pennock D. G. S., King's Building, Bombay

# Indian Architecture.

## I. ANCIENT.

The architecture of India has proceeded on lines of its own, and its monuments are unique among those of the nations of the world. An ancient civilization, a natural bent on the part of the people towards religious fervour of the contemplative rather than of the fanatical sort, combined with the richness of the country and the sterner building materials—these are a few of the factors that contributed to making what it was, while a stirring history gave it both variety and glamour. Indian architecture is a subject which at the best has been studied only imperfectly, and a really comprehensive treatise on it has yet to be written. The subject is a vast and varied one, and it may be such a treatise never will be written in the form of one work at any rate. The spirit of Indian art is so foreign to the European art culture that it is only one European in a hundred who can entirely understand it, while art criticism and analysis is a branch of study that the modern Indian has not as yet ventured upon to any appreciable extent. Hitherto the one, and with a few exceptions the only recognized authority on the subject has been Fergusson, whose compendious work—that which will find most ready acceptance by the general reader. But Fergusson attempted the nearly impossible task of covering the ground in one volume of moderate dimensions, and it is sometimes held that he was a man of too purely European a culture, albeit wide and eclectic, to admit of sufficient depth of insight in this particular direction. Fergusson's classification by races and religions is, however, the one that has been generally accepted hitherto. He asserts that there is no stone architecture in India of an earlier date than two and a half centuries before the Christian era, and that "India owes the introduction of the use of stone for architectural purposes, as she does that of Buddhism as a state religion, to the great Asoka, who reigned B.C. 272 to 236."

### Buddhist Work.

Fergusson's first architectural period is then the Buddhist, of which the great tope at Sanchi with its famous Northern gateway is perhaps the most noted example. Then we have the Gandharan topes and monasteries. Perhaps the examples of Buddhist architecture of greatest interest and most ready access to the general student are to be found in the Chaitya halls or rock-cut caves of Karli, Ajunta, Nasik, Ellora and Kanheri. A point with relation to the Gandhara work may be alluded to in passing. This is the strong European tendency, variously recognized as Roman, Byzantine but most frequently as Greek, to be observed in the details. The foliage seen in the capitals of columns bears strong resemblance to the Greek acanthus, while the sculptures have a distinct trace of Greek influence, particularly in the treatment of drapery, but also of hair and facial expression. From this it has been a fairly common assumption amongst some authorities that Indian art owed much of its best to European influence, an assumption that is strenuously combated by others as will be pointed out later.

The architecture of the Jains comes next in order. Of this rich and beautiful style the most noted examples are perhaps the Dilwara temples near Mount Abu, and the unique "Tower of Victory" at Chittore.

### Other Hindu Styles.

The Dravidian style is the generic title usually applied to the characteristic work of the Madras Presidency and the South of India. It is seen in many rock-cut temples as at Ellora, where the remarkable "Kylas" is an instance of a temple cut out of the solid rock, complete, not only with respect to its interior (as in the case of mere caves) but also as to its exterior. It is, as it were, a life-size model of a complete building or group of buildings, several hundred feet in length, not built, but sculptured in solid stone, an undertaking of vast and, to our modern ideas, unprofitable industry. The Pagoda of Tanjore, the temples at Srirangam, Chidambaram, Vellore, Vijayanagar, &c., and the palaces at Madura and Tanjore are among the best known examples of the style.

The writer finds some difficulty in following Fergusson's two next divisions of classification, the "Chalukyan" of South-central India, and the "Northern or Indo-Aryan style." The differences and the similarities are apparently so intermixed and confusing that he is fain to fall back on the broad generic title of "Hindu"—however unscientific he may thereby stand confessed. Amongst a vast number of Hindu temples the following may be mentioned as particularly worthy of study:—Those at Mukteswara and Bhuvanewar in Orissa, at Khajuraho, Bindrabun, Udaipur, Benares, Gwalior, &c. The palace of the Hindu Raja Man Singh at Gwalior is one of the most beautiful architectural examples in India. So also are the palaces of Amber, Dattiya, Uchha, Dig and Udaipur.

### Indo-Saracenic.

Among all the periods and styles in India the characteristics of none are more easily recognizable than those of what is generally called the "Indo-Saracenic" which developed after the Mahomedan conquest. Under the new influences now brought to bear on it the architecture of India took on a fresh lease of activity and underwent remarkable modifications. The dome, not entirely an unknown feature hitherto, became a special object of development, while the arch, at no time a favourite constructional form of the Hindu builders, was now forced on their attention by the predilections of the ruling class. The minaret also became a distinctive feature. The requirements of the new religion,—the mosque with its wide spaces to meet the needs of organized congregational acts of worship—gave opportunities for broad and spacious treatments that had hitherto been to some extent denied. The Moslem hatred of idolatry set a tabu on the use of sculptured representations of animate objects in the adornment of the buildings, and led to the development

of other decorative forms. Great ingenuity came to be displayed in the use of pattern and of geometrical and foliated ornament. This Moslem trait further turned the attention of the builders to a greater extent than before to proportion, scale and mass as means of giving beauty, mere richness of sculptured surface and the aesthetic and symbolic interest of detail being no longer to be depended on to the same degree.

The art was thus the gainer by the new conditions. It gained in power and variety much as "Classic" architecture gained under the Romans. But it equally lost something too. The Indo-Saracenic is apt to appear cold and hard. The writer was impressed by this on his first view of the Gwalior palace already mentioned. Though a Hindu building that palace has yet much of what might be called the more sophisticated quality of the Indo-Saracenic work as well as some similarity of detail. It has being Hindu a certain amount of sculptured ornament of animated forms, and the general effect of roundness, richness and interest thereby imparted seemed eloquent in suggestion as to what is lacking in so many of the Mahomedan buildings.

### Foreign Influence

There would appear to be a conflict between archaeologists as to the extent of the effect on Indian art produced by foreign influence under the Mahomedans. The extreme view on the one hand is to regard all the best of the art as having been due to foreign importation. The Gandharan sculptures with their Greek tendency, the development of new forms and modes of treatment to which allusion has been made, the similarities to be found between the Mahomedan buildings of India and those of North Africa and Europe, the introduction of the minaret and, above all, the historical evidences that exist of the presence in India of Europeans during Mogul times, are cited in support of the theory. On the other hand those of the opposite school hold the foregoing view to be due to the prevailing European preconception that all light and leading must come by way of Europe, and the best things in art by way of Greece. To them the Gandharan sculpture, instead of being the best is the worst in India even because of its Greek tincture. They find in the truly indigenous work beauties and significances not to be seen in the Græco-Bactrian sculptures, and point to those of Borobuddi in Java, the work of Buddhist colonists from India, wonderfully preserved by reason of an immunity from destructive influences given by the insular position, as showing the best examples of the art of art. It is probable that a just estimate of the merits of the controversy, with respect to sculpture at any rate, cannot be formed till time has obliterated some of the differences of taste that exist between East and West.

To the adherents of the newer school the undisputed similarities between Indo Mahomedan and Hindu buildings outweigh those between Indian and Western Mahomedan work, especially in the light of the dissimilarities between the latter. They admit the changes produced by the advent of Islam,

but contend that the art, though modified, yet remained in its essence what it had always been, indigenous Indian. The minaret, the dome, the arch, they contended, though developed under the Moslem influence, were yet, so far as their detailed treatment and craftsmanship are concerned, rendered in a manner distinctively Indian. Ferguson is usually regarded as the leader of the former school, while the latter and comparatively recent school has at present found an eager champion in Mr. L. B. Havell whose works, on the subject are recommended for study side by side with those of the former writer. Mr. Havell practically discards Ferguson's racial method of classification into styles in favour of a chronological review of what he regards to a greater extent than did his famous precursor as being one continuous homogeneous Indian mode of architectural expression though subject to variations from the influences brought to bear upon it and from the varied purposes to which it was applied.

### Agra and Delhi

Agra and Delhi may be regarded as the principal centres of the Indo Saracenic style—the former for the renowned Taj Mahal, for Akbar's deserted capital of Fatehpur Sikri, his tomb at Secundia, the Moti Masjid and palace buildings at the Agra fort. At Delhi we have the great Jumma Masjid the Fort, the tombs of Humayun, Sufdar Jung, &c., and the unique Qutb Minar. Two other great centres may be mentioned, because in each there appeared certain strongly marked individualities that differentiated the varieties of the style there found from the variety seen at Delhi and Agra, as well as that of one from that of the other. These are Ahmedabad in Gujarat and Bijapur on the Dekhan, both in the Bombay Presidency.

### Ahmedabad

At Ahmedabad with its neighbours Sukkhej and Champani there seems to be less of a departure from the older Hindu forms a tendency to adhere to the lint and bucket rather than to have recourse to the arch while the dome though constantly employed was there never developed to its full extent as elsewhere, or carried to its logical structural conclusion. The Ahmedabad work is probably most famous for the extraordinary beauty of its stone "jall"—or pierced lattice work, as in the palm tree windows of the Sidi Sayyid Masjid.

### Bijapur.

The characteristics of the Bijapur variety of the style are equally striking. They are perhaps more distinctively Mahomedan than those of the Ahmedabad buildings in that here the dome is developed to a remarkable degree, indeed the tomb of Mahmud—the well known "Gol Gumbaz"—is cited as shewing the greatest space of floor in any building in the world roofed by a single dome, not even excepting the Pantheon. The lintel also was here practically discarded in favour of the arch. The Bijapur style shews a bold masculine quality and a largeness of structural conception that is unequalled elsewhere in India, though in richness and delicacy it does not attempt to rival the work of the further North. In this we recognize among other influences

that of the prevailing material, the hard uncompromising Dekhan basalt. In a similar manner the characteristics of the Ahmedabad work with its greater richness of ornamentation are bound up with the nature of the Gujarati freestone, while at Delhi and Agra the freer

choice of materials available—the local red and white sandstones, combined with access to marble and other more costly materials—was no doubt largely responsible for the many easily recognizable characteristics of the architecture of these centres.

## II. MODERN.

The modern architectural work of India divides itself sharply into two classes. There is first that of the indigenous Indian "Master-builder" to be found chiefly in the Native States, particularly those in Rajputana. Second there is that of British India, or of all those parts of the peninsula wherever Western ideas and methods have most strongly spread their influence, chiefly in the case of architecture, through the medium of the Department of Public Works. The work of that department has been much unadverted upon as being all that building should not be, but, considering it has been produced by men of whom it was admittedly not the *metier*, and who were necessarily contending with lack of expert training on the one hand and with departmental methods on the other, it must be conceded that it can show many notable buildings. Of recent years there has been a tendency on the part of professional architects to turn their attention to India, and a number of these have even been drafted into the service of Government as the result of a policy initiated in Lord Curzon's Viceroyalty. In time, therefore, and with the growth of the influence of these men, such of the reproach against the building of the British in India as was just and was not merely thoughtlessly maintained as a corollary to the popular jape against everything official, may gradually be removed. If this is so as Government work progress should be more assured in the freer atmosphere of official life. Already in certain of the greater cities, where the trained modern architect has established himself, in private practice, there are signs that his influence is beginning to be felt. He still complains, however, that the general public of India needs much educating up to a recognition of his value, both in a pecuniary sense and otherwise. It is also to be observed that the survival of a relic of the popular idea of the time before his advent, to the effect that though an architect might occasionally "design" a building it was always an engineer who built it, is still indicated by the architect in some cases deeming it advisable to style himself "architect and engineer."

To the work of the indigenous "master-builder" public attention has of recent years been drawn with some insistence, and the suggestion has been pressed that efforts should be directed towards devising means for the preservation of what is pointed out—and now universally acknowledged—to be a remarkable survival—almost the only one left in the world—of "living art," but which is threatened with gradual extinction by reason of the spread of Western ideals and fashions. The matter assumed some years ago the form of a mild controversy centring round the question of the

then much discussed project of the Government of India's new capital at Delhi. It was urged that this project should be utilised to give the required impetus to Indian art rather than that it should be made a means of fostering European art which needed no such encouragement at India's expense. The advocates of this view appear for the most part to have been adherents of the "indigenous Indian" school of archaeologists already mentioned, and to have based their ideas on their own reading of the past. They still muster a considerable following not only amongst the artistic public of England and India, but even within the Government services. Their opponents, holding what appears to be the more official view both as to archaeology and art, have pointed to the "death" of all the arts of the past in other countries as an indication of a natural law, and deprecate as waste of energy all efforts to resist this law, or to institute what they have termed "another futile revival." The British in India, they contend, should do as did the ancient Romans in every country on which they planted their conquering foot. As those were wont to replace indigenous art with that of Rome, so should we set our seal of conquest permanently on India by the erection of examples of the best of British art. This is the view which, as we have indicated, appears to have obtained for the moment the more influential hearing, and the task of designing and directing the construction of the principal buildings in the new Capital has accordingly been entrusted jointly to a London and to a South African architect, neither of whom can be unduly influenced by either past or recent architectural practice so far as India is concerned.

The results cannot but be awaited with the keenest interest, and meanwhile the controversy, with suspended judgment, naturally falls into abeyance. It is, moreover, however vital to the interests of the country's architecture, too purely technical and academic for its merits to be estimated by the general reader or discussed here. Its chief claim on our attention has in the fact that it affords an added interest to the tourist, who may see the fruits of both schools of thought in the various modern buildings of British India as well as examples of the "master builders" work in nearly every native town and bazaar. The town of Lashkar in Gwalior State may be cited as peculiarly rich in instances of picturesque modern Indian street architecture, while at Jaipur, Udaipur, Benares, etc., this class of work may be studied in many different forms both civil and religious. The extent to which the "unbroken tradition from the past" exists may there be gauged by the traveller who is architect enough for the purpose.

## Archæology.

The archæological treasures of India are as varied as they are numerous. Those of the pre-Muhammadan period may roughly be divided into (1) architectural and sculptural monuments and (2) inscriptions. No building or sculpture in India with any pretensions to be considered an example of architecture or art can be ascribed to a time earlier than that of Asoka (circa 250 B.C.). In the pre-Asoka architecture of India, as in that of Burma or China at the present day, wood was solely or almost solely employed. Even at the close of the 4th century, B.C., Megasthenes, the Greek Ambassador at the court of Chandragupta, grandfather of Asoka, describes Pataliputra, the capital of the Indian monarch, as "surrounded by a wooden wall pierced with loop-holes for the discharge of arrows." If the capital itself was thus defended, we can easily infer that the architecture of the period was wooden. And long after stone was introduced the lithic styles continued to be influenced by, or copied from, the wooden.

**Monumental Pillars.**—The first class of works that we have to notice are the monumental pillars, known as *lots*. The oldest are the monolithic columns of Asoka, nearly thirty in number, of which ten bear his inscriptions. Of these the Lauriya-Nandangarh column in the Champaran District, Tirhut, is practically uninjured. The capital of each column, like the shaft, was monolithic, and comprised three members, viz., a Persepolitan bell, abacus, and crowning sculpture in the round. By far the best capital of Asoka's time was that exhumed at Sarnath near Benares. The four lions standing back to back on the abacus are carved with extraordinary precision and accuracy. Of the post-Asokan period one pillar (B.C. 150) stands to the north-east of Benares in the Gwalior State, another in front of the cave of Karli (A.D. 70), and a third at Eran in Central Provinces belonging to the 5th Century, A. D. All these are of stone; but there is one of iron also. It is near the Qutb Minar at Delhi, and an inscription on it speaks of its having been erected by a king called Chandra, identified with Chandragupta II. (A.D. 375-413) of the Gupta dynasty. It is wonderful "to find the Hindus at that age forging a bar of iron larger than any that have been forged even in Europe to a very late date, and not frequently even now." Pillars of later style are found all over the country, especially in the Madras Presidency. No less than twenty exist in the South Kanara District. A particularly elegant example faces a Jaina temple at Mudabidri, not far from Managalore.

**Topes.**—*Stupas*, known as *dagabas* in Ceylon and commonly called Topes in North India, were constructed either for the safe custody of relics hidden in a chamber often near the base or to mark the scene of notable events in Buddhist or Jaina legends. Though we know that the ancient Jains built *stupas*, no specimen of Jaina *stupas* is now extant. Of those belonging to the Buddhists, the great Tope of Sanoli in Bhopal, is the most intact and entire of its class. It consists of a low circular drum supporting a hemispherical dome of less diameter. Round the drum is an open passage for circum-

ambulation, and the whole is enclosed by a massive stone railing with lofty gates facing the cardinal points. The gates are essentially wooden in character, and are carved, inside and out, with elaborate sculptures. The *stupa* itself probably belonged to the time of Asoka, but as Sir John Marshall's recent explorations have conclusively shown, the railing and the gateways were at least 150 and 200 years later, respectively. Other famous Buddhist *stupas* that have been found are those of Bharhut, between Allahabad and Jubbulpore, Amravati in the Madras Presidency, and Piprahwa on the Nepalese frontier. The tope proper at Bharhut has entirely disappeared, having been utilised for building villages, and what remained of the rail has been removed to the Calcutta Museum. The bas-reliefs on this rail which contain short inscriptions and thus enable one to identify the scenes sculptured with the *Jatakas* or Birth Stories of Buddha give it a unique value. The *stupa* at Amravati also no longer exists, and portions of its rail, which is unsurpassed in point of elaboration and artistic merit, are now in the British and Madras Museums. The *stupa* at Piprahwa was opened by Mr. W. C. Peppe in 1898, and a steatite or soap-stone reliquary with an inscription on it was unearthed. The inscription, according to many scholars, speaks of the relics being of Buddha and enshrined by his kinsmen, the Sakyas. And we have thus here one of the *stupas* that were erected over the ashes of Buddha immediately after his demise.

**Caves.**—Of the rock excavations which are one of the wonders of India, nine-tenths belong to Western India. The most important groups of caves are situated in Bhaja Bedsa, Karli, Kanheri, Junnar, and Nasik in the Bombay Presidency, Ellora and Ajanta in Nizam's Dominions, Barabar 16 miles north of Gaya, and Udayagiri and Khandagiri 20 miles from Cuttack in Orissa. The caves belong to the three principal sects into which ancient India was divided, viz., the Buddhists, Hindus and Jains. The earliest caves so far discovered are those of Barabar which were excavated by Asoka and his grandson Dasaratha, and dedicated to Ajivikas, a naked sect founded by Makkhali Gosala. This refutes the theory that cave architecture was of Buddhist origin. The next earliest caves are those of Bhaja, Pitalkhora and cave No. 9 at Ajanta and No. 19 at Nasik. They have been assigned to 200 B.C. by Fergusson and Dr. Burgess. But there is good reason to suppose from Sir John Marshall's recent researches and from epigraphic considerations that they are considerably more modern. The Buddhist caves are of two types—the *chaityas* or chapel caves and *viharas* or monasteries for the residence of monks. The first are with vaulted roofs and horse-shoe shaped windows over the entrance and have interiors consisting of a nave and side aisles with a small *stupa* at the inner circular end. They are thus remarkably similar to Christian basilicas. The second class consist of a hall surrounded by a number of cells. In the later *viharas* there was a sanctum in the centre of the back wall containing a large image of Buddha. Hardly a *chaitya* is found without one or more *viharas* adjoining it. Of the Hindu cave tem-

ples that at Elephanta near Bombay is perhaps the most frequented. It is dedicated to Siva and is not earlier than the 7th century A.D. But by far the most renowned cave-temple of the Hindus is that known as Kailasa at Ellora. It is on the model of a complete structural temple but carved out of solid rock. It also is dedicated to Siva and was excavated by the Rashtrakuta king, Krishna I., (A. D. 768), who may still be seen in the paintings in the ceilings of the upper porch of the main shrine. Of the Jaina caves the earliest are at Khandgiri and Udayagiri; those of the mediæval type, in Indra Sabha at Ellora; and those of the latest period, at Ankai in Nasik. The ceilings of many of these caves were once adorned with fresco paintings. Perhaps, the best preserved among these are those at Ajanta, which were executed at various periods between 350-650 A.D. and have elicited high praise as works of art. Copies were first made by Major Gill, but most of them perished by fire at the Crystal Palace in 1886. The lost ones were again copied by John Griffiths of the Arts School, Bombay, half of whose work was similarly destroyed by a fire at South Kensington. They were last copied by Lady Herringham during 1909-11. Her pictures, which are in full scale, are at present exhibited at the Indian Section of the Victoria and Albert Museum, South Kensington, and have been reproduced in a volume brought out by the India Society.

**Gandhara Monuments.**—On the north-west frontier of India, anciently known as Gandhara, are found a class of remains, ruined monasteries and buried stupas, among which we notice for the first time representations of Buddha and the Buddhist pantheon. The free use of Corinthian capitals, friezes of nude Erotes bearing a long garland, winged Atlantes without number, and a host of individual motifs clearly establish the influence of Hellenistic art. The mound at Peshawar, locally known as Shah-j-i-ke-Dheri, which was explored in 1909, brought to light several interesting sculptures of this school together with a reliquary casket, the most remarkable bronze object of the Gandhara period. The inscription on the casket left no doubt as to the mound being the *stupa* raised over the bones of Buddha by the Indo-Scythian king Kanishka. They were presented by Lord Minto's Government to the Buddhists of Burma and are now enshrined at Mandalay. To about the same age belong the stupas at Manikyala in the Punjab opened by Ranjit Singh's French Generals, Ventura and Court, in 1830. Some of them contained coins of Kanishka.

**Structural Temples.**—Of this class we have one of the earliest examples at Sanchi, and another at Tigowa in the Central Provinces. In South India we have two more examples, viz., Lad Khan and Durga temples at Ahole in Bijapur. All these belong to the early Gupta period and cannot be later than 500 A.D. The only common characteristic is flat roofs without spires of any kind. In other respects they are entirely different and already here we mark the beginning of the two styles, Indo-Aryan and Dravidian, whose differences become more and more pronounced from the 7th century onwards. In the Indo-Aryan style, the most prominent lines tend to the perpendicular, and in the

Dravidian to the horizontal. The salient feature of the former again is the curvilinear steeple, and of the latter, the pyramidal tower. The most notable examples of the first kind are to be found among the temples of Bhuvaneshwar in Orissa, Khajurah in Bundelkhand, Osia in Jodhpur, and Dilwara on Mount Abu. One of the best known groups in the Dravidian style is that of the Mamallapuram Rathas, of 'Seven Pagodas', on the seashore to the south of Madras. They are each hewn out of a block of granite, and are rather models of temples than raths. They are the earliest examples of typical Dravidian architecture, and belong to the 7th century. To the same age has to be assigned the temple of Kailasanath at Conjeeveram, and to the following century some of the temples at Ahole and Pattadakal of the Bijapur District, Bombay Presidency, and the monolithic temple of Kailasa at Ellora, referred to above. Of the later Dravidian style the great temple at Tanjore and the Srirangam temple of Trichinopoly are the best examples.

Intermediate between these two main styles comes the architecture of the Deccan, called Chalukyan by Fergusson. In this style the plan becomes polygonal and star-shaped instead of quadrangular; and the high-storeyed spire is converted into a low pyramid in which the horizontal treatment of the Dravidian is combined with the perpendicular of the Indo-Aryan. Some fine examples of this type exist, at Dambal, Rattihalli, Thilwail and Hangal in Dharwar, Bombay Presidency, and at Ittagi and Warangal in Nizam's Dominions. But it is in Mysore among the temples at Hallebid, Belur, and Somnathpur that the style is found in its full perfection.

**Inscriptions.**—We now come to inscriptions, of which numbers have been brought to light in India. They have been engraved on varieties of materials, but principally on stone and copper. The earliest of these are found incised in two distinct kinds of alphabet, known as Brahmi and Kharoshthi. The Brahmi was read from left to right, and from it have been evolved all the modern vernacular scripts of India. The Kharoshthi was written from right to left, and was a modified form of an ancient Aramaic alphabet introduced into the Punjab during the period of the Persian domination in the 5th century, B.C. It was prevalent up to the 4th century, A.D., and was supplanted by the Brahmi. The earliest dateable inscriptions are the celebrated edicts of Asoka. One group of these has been engraved on rocks, and another on pillars. They have been found from Shahbazgarhi 40 miles north-east of Peshawar to Nigliva in the Nepal Tarai, from Girnar in Kathiawar to Dhauli in Orissa, from Kalsi in the Lower Himalayas to Siddapur in Mysore, showing by the way the vast extent of territory held by him. The reference in his Rock Edicts to the five contemporary Greek Princes, Antiochus II. of Syria, Ptolemy Philadelphus, and so forth is exceedingly interesting, and fixes B.C. 269 as the date of his coronation. His Rummindel pillar inscription, again, discovered in Nepal Tarai, now settles, beyond all doubt, the birth-place of Buddha which was for long disputed. Another noteworthy record is the inscription of the Bannagar pillar. The pillar had been known for a long time, but Sir John



Marshall was the first to notice the inscription on it. It records the erection of this column, which was a Garuda pillar, in honour of the god Vasudeva by one Heliodoros, son of Dion, who is described as an envoy of King Antialkidas of Taxila. Heliodoros is herein called a *Bhagavata*, which shows that though a Greek he had become a Hindu and presumably a Vaishnava. Another inscription worth noticing and especially in this connection is that of Cave No. 10 at Nasik. The donor of this cave, Ushavadata, who calls himself a Saka and was thus an Indo-Scythian, is therein spoken of as having granted three hundred thousand kine and sixteen villages to gods and Brahmans and as having annually fed one hundred thousand Brahmans. Here is another instance of a foreigner having embraced Hinduisms. Thus for the political, social, economical and religious history of India at the different periods the inscriptions are invaluable records, and are the only light but for which we are 'forlorn and blind.'

**Saracenic Architecture.**—This begins in India with the 13th century after the permanent occupation of the Muhammadans. Their first mosques were constructed of the materials of Hindu and Jaina temples, and sometimes with comparatively slight alterations. The mosque called *Adhar-din-ka-jhompra* at Ajmer and that near the Qutb Minar are instances of this kind. The Muhammadan architecture of India varied at different periods and under the various dynasties, imperial and local. The early Pathan architecture of Delhi was massive and at the same time was characterised by elaborate richness of ornamentation. The Qutb Minar and tombs of Altamsh and Ala-ud-din Khilji are typical examples. Of the Sharqi style we have three mosques in Jaunpur with several tombs. At Mandu in the Dhar State, a third form of Saracenic architecture sprung up, and we have here the Jamī Masjid, Hosliang's tomb, Jahaz Mahall and Hindola Mahall as the most notable instances of the secular and ecclesiastical styles of the Malwa Pathians. The Muhammadans of Bengal again developed their own style, and Pandua, Malda, and Gaur teem with the ruins of the buildings of this type, the important of which are the Adina Masjid of Sikandar Shah, the Ekakhi mosque, Kadam Rasul Masjid, and so forth. The Bahmani dynasty of Gulbarga and Bidar were also great builders, and adorned their capitals with important buildings. The most striking of these is the great mosque of Gulbarga, which differs from all mosques in India in having the whole central area covered over so that what in others would be an open court is here roofed by sixty-three small domes. "Of the various forms which the Saracenic architecture assumed," says Fergusson, "that of Ahmedabad may probably be considered to be the most elegant." It is notable for its carved stone work; and the work of the perforated stone windows in Sidi Sayyid's mosque, the carved niches of the minars of many other mosques, the sculptured *Mihrabs* and domed and panelled roofs is so exquisite that it will rival anything of the sort executed elsewhere at any period. No other style is so essentially Hindu. In complete contrast with this was the form of architecture employed by the Adil Shahi dynasty of Bijapur.

There is here relatively little trace of Hindu forms or details. The principal buildings now left at Bijapur are the Jamī Masjid, Gagan Mahall, Mihtar Mahall, Ibrahim Rauza, and mosque and the Gol Gumbaz. Like their predecessors, the Pathans of Delhi, the Moghuls were a great building race. Their style first began to evolve itself during the reign of Akbar in a combination of Hindu and Muhammadan features. Noteworthy among the emperor's buildings are the tomb of Humayun, and the palaces at Fatehpur, Sikri and Agra. Of Jehangir's time his mosque at Lahore and the tomb of Itimad-ud-daula are the most typical structures. "The force and originality of the style gave way under Shah Jahan to a delicate elegance and refinement of detail." And it was during his reign that the most splendid of the Moghul tombs, the Taj Mahal at Agra, the tomb of his wife Mumtaz Mahall, was constructed. The Moti Masjid in Agra Fort is another surpassingly pure and elegant monument of his time.

**Archæological Department.**—As the archæological monuments of India must attract the attention of all intelligent visitors, they would naturally feel desirous to know something of the Archæological Department. The work of this Department is primarily two-fold, conservation, and research and exploration. None but spasmodic efforts appear to have been made by Government in these directions till 1870 when they established the Archæological Survey of India and entrusted it to General (afterwards Sir) Alexander Cunningham, who was also the first Director-General of Archæology. The next advance was the initiation of the local Surveys in Bombay and Madras three years after. The work of these Surveys, however, was restricted to antiquarian research and description of monuments, and the task of conserving old buildings was left to the fitful efforts of the local Governments, often without expert guidance or control. It was only in 1878 that the Government of India under Lord Lytton awoke to this deplorable condition, and sanctioned a sum of 3½ lakhs to the repair of monuments in United Provinces, and soon after appointed a conservator, Major Cole, who did useful work for three years. Then a reaction set in, and his post and that of the Director-General were abolished. The first systematic step towards recognising official responsibility in conservation matters was taken by Lord Curzon's Government, who established the seven Archæological Circles that now obtain, placed them on a permanent footing, and united them together under the control of a Director-General, provision being also made for subsidising local Governments out of imperial funds, when necessary. The Ancient Monuments Preservation Act was passed for the protection of historic monuments and relics especially in private possession and also for State control over the excavation of ancient sites and traffic in antiquities. Under the direction of Sir John Marshall, Kt., C.I.E., Director-General of Archæology, a comprehensive and systematic campaign of repair has been prosecuted, and the result of it is manifest in the present altered conditions of old buildings. One has only to see for example the Moghul buildings at Agra, Delhi, Lahore and Ajmer, in order to be convinced how the work of careful reconstruc-

tion and repair has converted these decayed and desecrated monuments with their modern excrescences into edifices of unrivalled loveliness. Another noteworthy feature of this work has been the rescue of many of these buildings from profane and sacrilegious uses. It is well-known that the superb Pearl Mosque of Jahangir in the Lahore Fort contained a Government treasury, and the Sleeping Hall of Shah Jahan served as a Church for the British troops. At Bijapur two mosques have been recovered, one of which was used as Dak Bungalow and the other as Post Office. The local Kutcherry has now been expelled from the lovely masjid of Sidi Sayyid at Ahmedabad. The Cave temples at Trichinopoly are no longer godowns. Nor has research work been in any way neglected under the new order of things. A unique feature of it for the first time introduced under the guidance and advice of Sir John Marshall has been the scientific excavation of buried sites, such as Sarnath where Buddha preached his first sermon, Kasia or Kusinara where he died, Saheth-Maheth the ancient Srasvati,

Taxila or Takshasila, the seat of the ancient Hindu University, Patna or Pataliputra, the Mauryan capital, Besnagar or the ancient Vidisa, and so forth. The results achieved, especially at the last three places, are of a sensational character. At Taxila Sir John has brought to light the remains of a palace of the Assyrian style and a massive and imposing temple dedicated to Zoroastrian worship and resembling a Greek peripteral temple with the addition of a solid tower of the Likkurat type rising behind the shrine. At Patna Dr. D. B. Spooner has found traces of a Mauryan palace which is an actual replica of the Achemenian palace at Persepolis. At Besnagar Mr. D. R. Bhandarkar has excavated a temple of Vasudeva of the third century B.C., which proves to be the oldest of all Hindu shrines in India. Among other results of this excavation is the noteworthy discovery that the art of forging steel was practised in India more than two thousand years ago and that mortar was used in the construction of brick masonry at least as early as the third century B.C.

## Indian Art.

Within the last few years there has been a most interesting and promising, though somewhat narrowly confined, revival in Indian Art. For this, it is to be feared, scant credit is due to British educational policy in India, though the impetus has come mainly from a few British and other European enthusiasts who have reminded cultured India of the value of its ancient artistic heritage and indicated the possibilities of revival. Each year between 6,000 and 7,000 students pass the various examinations of the four Schools of Arts maintained by the State, but until very recently these institutions have been in some respects seriously mistaken in ideal and method. Viewing their work over half a century it may be said broadly that they have paid very inadequate attention to the traditions of Indian Art, and that in consciously or unconsciously encouraging Western influences, which the Indian student could not thoroughly assimilate, they have not even been particular to choose good examples of Western art. Nor have the Schools of Arts been altogether free from the taint of commercialism; indeed, for some years one of them was in effect something between an industrial workshop and an emporium for selling Indian curiosities merely designed to meet the taste of tourists. In justice to the Schools it should be added that they have seldom been able to attract into them members of the hereditary craftsmen class. The material they have had to work with has been unpromising. Further, even for students who might attain to conspicuous skill, there have been few openings in after-life. All this is now changing, but the improvement began only some fifteen years ago, and it is mainly due to agencies more or less independent of the schools.

### A Notable Revival.

The revival which has already produced one notable artist, Mr. Abanindranath Tagore, is

the direct outcome of the study of the work of the best periods of Indian art. In order to comprehend it, it is therefore necessary to glance back over the history of art in India. With sculpture we are here not particularly concerned, for there is no perceptible revival in it at present; but it may be said in passing that its golden age in India was the period which produced the sculptures of Ellora and Elephanta, that in its finest examples this art was genuinely Indian, for the Gandhara sculptures, which show strong Greek influence, are inferior enough to make the contention that India owed much to Greece absurd, and that perhaps the finest "Indian" sculpture is to be found in Java, where at Borobudur, in the eighth and ninth centuries A.D. the descendants of Indian emigrants wrought a long series of mighty masterpieces. As regards paintings, we begin with those at Ajanta, produced at intervals between the first century before Christ and perhaps the seventh century of the Christian era. A typical example, in which a mother and her child supplicating Buddha are presented not only with much technical skill but with tenderness of feeling, may be found reproduced in Griffith's book on Ajanta and in Mr. Havell's "Indian Sculpture and Painting." These paintings are true frescoes, differing in method from the Italian in little but the use of mechanical as well as chemical combination of colours.

Practically all the work of this time has perished, and of the secular art of the period before the Moguls there is scant vestige. With the Moguls for the first time painting becomes frankly secular. Whereas a Hindu philosopher had laid it down that it was iniquitous to represent natural objects when the divinities could be made the artist's subjects, the Islamic dislike of idolatry naturally conduced to the development of secular painting. These Mogul artists were Persians or others, more

or less under the influence of the Persian school. Akbar patronised them liberally, and Abul Fazl, his historiographer, records the triumphs of Mir Sayyid Ali, a Persian, and Daswanth, a Hindu of humble origin, whose life, darkened by insanity, ended by suicide. The work of these and their fellows is notable for minute finish, but it is stiff, and in colour often crude.

### Mughal Painting.

It was in the reign of Jehangir (1605-1628) that Mogul painting reached its highest level, and it is to that period that the Indian painter of to-day and to-morrow must look for the best models for all work of theirs which is not inspired by Hindu philosophy or religion. The Emperor was himself a consummate connoisseur, capable, it is recorded, of discriminating unerringly between the work of the artists of the same school. Sherif Khan, Mansur and Abdul Hassan, the chief artists of his time, were by him highly honoured; the last, in fact, owed his training as well as distinctions and rewards to the Emperor. These and several other painters of the period excelled in portrait-miniatures, of which happily, in consequence of the practice of rolling up paintings like MSS. and only occasionally exhibiting them to view, we have many examples in good condition. These artists are markedly superior to their predecessors' influence and grace of line and show that they benefited by the closer observation of natural facts inculcated from about 1600 onwards. Many of the outline drawings, done with lampblack over a preliminary sketch faintly carried out with a fine brush dipped in Indian red, are of exquisite quality. It is noteworthy that, though in some cases landscape is well rendered as a mere background, there are no examples in Indian painting of the classic age of pure landscape: here the Indian painter of to-day has to develop an ideal with hardly any suggestion from predecessors. The puritanical and bigoted Aurangzeb was naturally hostile to art, and by the middle of the eighteenth century all the glory had departed from Indian painting, though a measure of skill in traditional methods long survived and for a time was not unappreciated by Englishmen in India. By the early years of the nineteenth century, however, Indian painting had virtually ceased to exist. At length a painter arose, to be much admired by the worst judges among those Indians whose Western education had made them indifferent to indigenous art without giving them any real interest in European art. This man, Ravi Varma, depicted Indian legends as if he were painting figures in amateur tableaux; of Indian art traditions there is not a trace in his work, which is theatrical, sentimental and of poor quality technically. There have been others who have more successfully assimilated something of Western ideas of art, but their work is without interest, except in so far as it exhibits a deplorable subservience to second-rate Western teaching. The movement of to-day which arouses high expectations is that in which Mr. Abanindranath Tagore is the leader. This artist, member of a Bengali family, noted for culture and cousin of the poet Rabindranath Tagore, has made a close and most profitable

study of the work of the Mogul and other painters of India, but he has seen in the examples of their work not something to be slavishly copied but certain principles which he applies freshly, in his own way. He has imagination, a sense of composition, a delicate sense of colour and much, though as yet perhaps not quite secure, command of the technical resources of his art. Above all, he is sincere; nowhere is there in his work any deliberate exploitation of the fact that he is an Eastern artist who must at all costs exhibit Nationalism in his painting. One of his pictures representing the spirits of the air, is justly famous, and his admirable illustrations to Omar Khayyam, issued by the *Studio*, have found appreciation in England as well as in India. Among those more or less associated with this painter, who as Vice-Principal of the Calcutta School of Art, is exercising a strong influence within narrow limits, may be mentioned Mr. Surendranath Ganguly and Mr. Nanda Lal Bose, the latter of whom has a vein of true poetic feeling and both of whom work in intelligent but not abject obedience of the old tradition of Indian painting. If there is no fourth name at present to put besides those mentioned, there is every reason to believe there soon will be several.

### Modern Interest.

At the present time there is a marked development of interest among educated Indians in arts indigenous to their country, but it must be recognised that there is little real knowledge and taste in the public to which the Indian artist of to-day has to address himself. Work is esteemed rather as proof of Indian capacity than for its strict artistic merits. Among those Indians and Europeans who have devoted special attention to the matter there is an unfortunate tendency to exaggerate the value of old Indian art and thus to encourage the belief that the Indian artist of to-day can find no higher task than the repetition of old and narrow conventions. It is perfectly true that we must accept the convention of any art without *a priori* objections, but it by no means follows that one convention is as good as another. The question arises what limits a convention sets on those working within it, and it is plain that the conventions of Indian art have compelled the exclusion of a vast amount of the Western painter's best material. On the other hand, it should be recognised that his traditions have made it almost impossible for the Indian artist to fall into the common Western error of taking a mere representation of fact to be the aim of art. It is most desirable that the Indian artist of to-day should revive the old traditions; that he should be genuinely Indian, but it is not desirable that he should needlessly cramp himself because certain enthusiasts assure him that the defects and limitations of classic Indian art are positive merits. The Indian artist has a vast treasure of religious and philosophical matter to draw upon for such subjects as are most congenial to the Hindu genius, and he has the whole range of Indian life to observe and create over again. There is no occasion for an unwise asceticism on the ground that ancient conventions ruled out most of the material.

## Manners and Customs.

Next to the complexion of the people, which varies from fair to black, the tourist's attention in India is drawn by their dress and personal decoration. In its simplest form a Hindu's dress consists of a piece of cloth round the loins. Many an ascetic, who regards dress as a luxury, wears nothing more, and he would dispense with even so much if the police allowed him to. The Mahomedan always covers his legs, generally with trousers, sometimes with a piece of cloth tied round the waist and reaching to the ankles. Hill men and women, who at one time wore a few leaves before and behind and were totally innocent of clothing, do not appear to-day within the precincts of civilisation and will not meet the tourist's eye. Children, either absolutely nude or with a piece of metal hanging from the waist in front, may be seen in the streets in the most advanced cities, and in the homes of the rich. The child Krishna, with all the jewels on his person, is nude in his pictures and images.

**Dress.**—The next stage in the evolution of the Hindu dress brings the loincloth nearly down to the feet. On the Malabar coast, as in Burma, the ends are left loose in front. In the greater part of India, they are tucked up behind—a fashion which is supposed to befit the warrior, or one end is gathered up in folds before and the other tucked up behind. The simplest dress for the trunk is a sari thrown over the left shoulder, or round both the shoulders like a Roman toga. Under this garment is often worn a coat or a shirt. When an Indian appears in his full indigenous dress, he wears a long robe, reaching at least down to the calves: the sleeves may be wide, or long and sometimes puckered from the wrist to the elbow. Before Europeans introduced buttons, a coat was fastened by ribbons, and the fashion is not obsolete. The Mahomedan prefers to button his coat to the left, the Hindu to the right. A shawl is tied round the waist over the long coat, and serves as a belt, in which one may carry money or a weapon, if allowed. The greatest variety is shown in the head-dress. More than seventy shapes of caps, hats, and turbans, may be seen in the city of Bombay. In the Punjab and the United Provinces, in Bengal, in Burma and in Madras other varieties prevail. Cones and cylinders, domes and truncated pyramids, high and low, with sides at different angles: folded brims, projecting brims: long strips of cloth wound round the head or the cap in all possible ways, ingenuity culminating perhaps in the "parrot's beak" of the Maratha turban—all these fashions have been evolved by different communities and in different places, so that a trained eye can tell from the head-covering whether the wearer is a Hindu, Mahomedan or Parsi, and whether he hails from Poona or Dharwar. Ahmedabad or Bhavnagar.

**Fashion Variations.**—Fashions often vary with climate and occupation. The Bombay fisherman may wear a short coat and a cap, and may carry a watch in his pocket; yet, as he must work for long hours in water, he would not cover his legs, but suspend only a coloured kerchief from his waist in front. The Pathan of the cold north-west affects loose baggy

trousers, a tall head-dress befitting his stature and covers his ears with its folds as if to keep off cold. The poorer people in Bengal and Madras do not cover their heads, except when they work in the sun or must appear respectable. Many well-to-do Indians wear European dress at the present day, or a compromise between the Indian and European costumes, notably the Indian Christians and Parsis. Most Parsis however have retained their own head-dress, and many have not borrowed the European collar and cuffs. The majority of the people do not use shoes: those who can afford them wear sandals, slippers and shoes, and a few cover their feet with stockings and boots after the European fashion in public.

**Women's Costumes.**—The usual dress of a woman consists of a long piece of cloth tied round the waist, with folds in front, and one end brought over the shoulder or the head. The folds are sometimes drawn in and tucked up behind. In the greater part of India women wear a bodice: on the Malabar coast many do not, but merely throw a piece of cloth over the breast. In some communities petticoats, or drawers, or both are worn. Many Mussalman ladies wear gowns and scarfs over them. The vast majority of Mahomedan women are *goshas*, and their dress and persons are hidden by a veil when they appear in public: a few converts from Hinduism have not borrowed the custom. In Northern India Hindu women have generally adopted the Mussalman practice of seclusion. In the Dekhan and in Southern India they have not.

As a rule the hair is daily oiled, combed, parted in the middle of the head, plaited and rolled into a chignon, by most women. Among high caste Hindu widows sometimes shave their heads in imitation of certain ascetics, or monks and nuns. Hindu men do not, as a rule, completely shave their heads, Mahomedans in most cases do. The former generally remove the hair from a part of the head in front, over the temples, and near the neck, and grow it in the centre, the quantity grown depending upon the fancy of the individual. Nowadays many keep the hair cropped in the European fashion, which is also followed by Parsis and Indian Christians. Most Mussalmans grow beards, most Hindus do not, except in Bengal and elsewhere, where the Mahomedan influence was paramount in the past. Parsis and Christians follow their individual inclinations. Hindu ascetics, known as Sadhus or Bairagis as distinguished from Sanyasis, do not clip their hair, and generally coil the uncombed hair of the head into a crest, in imitation of the god Shiva.

Hindu women wear more ornaments than others of the corresponding grade in society. Ornaments bedeck the head, the ears, the nose, the neck, the arms, wrists, fingers, the waist—until motherhood is attained, and by some even later—and the toes. Children wear anklets. Each community affects its peculiar ornaments, though imitation is not uncommon. Serpents with several heads, and flowers, like the lotus, the rose, and the champaka, are among the most popular object of representation in gold or silver.

**Caste Marks.**—Caste marks constitute a mode of personal decoration peculiar to Hindus, especially of the higher castes. The simplest mark is a round spot on the forehead. It represents prosperity or joy, and is omitted in mourning and on fast-days. It may be red, or yellowish as when it is made with ground sandalwood paste. The worshippers of Vishnu draw a vertical line across the spot, and as Lakshmi is the goddess of prosperity, it is said to represent her. A more elaborate mark on the forehead has the shape of U or V, generally with the central line, sometimes without it, and represents Vishnu's foot. The worshippers of Shiva adopt horizontal lines, made with sandalwood paste or ashes. Some Vaishnavas stamp their temples, near the corners of the eyes, with figures of Vishnu's conch and disc. Other parts of the body are also similarly marked. The material used is a kind of yellowish clay. To smear the arms and the chest with sandalwood paste is a favourite kind of toilet, especially in the hot season. Beads of Tulsi or sacred Basil, and berries of Rudraksha *elaeagnus ganitrus*, strung together are worn round their necks by Vaishnavas and Shaivas, respectively. The Lingayats, a Shalva sect, suspend from their necks a metallic casket containing the Linga or phallus of their god. Bairagis, ascetics, besides wearing Rudraksha rosaries round their necks and matted hair, smear their bodies with ashes. Religious mendicants suspend from their necks figures of the gods in whose name they beg. Strings of cowries may also be seen round their necks. Muslim dervishes sometimes carry peacocks feathers.

Hindu women mark their foreheads with a red spot or horizontal line. High caste widows are forbidden to exhibit this sign of happiness, as also to deck themselves with flowers or ornaments. Flowers are worn in the chignon. Hindu women smear their faces, arms, and feet sometimes with a paste of turmeric, so that they may shine like gold. The choice of the same colour for different purposes cannot always be explained in the same way. The red liquid with which the evil eye is averted may be a substitute for the blood of the animal slaughtered for the purpose in former times. In many other cases this colour has no such associations. The Muslim dervish affects green, the Sikh Akali is fond of blue, the Sanyasi adopts orange for his robe, and no reason can be assigned with any degree of certainty.

**Shiva.**—India is a land of temples, mosques and shrines, and the Hindu finds at every turn some supernatural power to be appeased. Shiva has the largest number of worshippers. He has three eyes, one in his forehead, a moon's crescent in his matted hair, and at the top of the coil a woman's face representing the river Ganges. His abode is the Mount Kailas in the Himalayas, from which the river takes its source. Round his neck and about his ears and limbs are serpents, and he also wears a necklace of skulls. In his hands are several weapons, especially a trident, a bow, and a thunderbolt, and also a drum which he sounds while dancing for he is very fond of this exercise. He sits on a tiger's skin, and his vehicle is a white bull. His wife Parvati and his son Ganesha sit on his thighs. An esoteric mean-

ing is attached to every part of his physical personality. The three eyes denote an insight into the past, present and future: the moon, the serpents, and the skulls denote months, years and cycles, for Shiva is a personification of time, the great destroyer. He is also worshipped as a Linga or phallus which represents creative energy.

**Ganpat.**—Ganesha or Ganpati, the controller of all powers of evil subject to Shiva, is worshipped by all sects throughout India. Every undertaking is begun with a prayer to him. He has the head of an elephant, a large abdomen, serpents about his waist and wrists, several weapons in his hands, and a piece of his tusk in one hand. He is said to have broken it off when he wanted to attack the moon for ridiculing him. The different parts of his body are also esoterically explained. His vehicle is a rat.

**Parvati.**—Parvati, the female energy of Shiva, is worshipped under various names and forms. She is at the head of all female supernatural powers, many of whom are her own manifestations. Some are benign and beautiful, others terrible and ugly. Kali, the tutelary deity of Calcutta or Calcutta, is one of her fierce manifestations. In this form she is black: a tongue smeared with blood projects from her gaping mouth: besides her weapons, she carries corpses in her hands, and round her neck are skulls. Bombay also takes its name from a goddess, Mumbadevi. Gouri, to whom offerings are made in Indian homes at an annual festival, is benign. On the other hand the epidemic diseases like the plague and small-pox are caused by certain goddesses or "mothers."

**Vishnu,** the second member of the Hindu trinity, is the most popular deity next to Shiva. He is worshipped through his several incarnations as well as his original personality. His home is the ocean of milk, where he reclines on the coils of a huge, many-headed serpent. At his feet sits Lakshmi, shampooing his legs. From his navel issues a lotus, on which is seated Brahma, the third member of the trinity. In his hands are the conch, which he blows on the battlefield, and the disc, with which the heads of his enemies are severed. Round his neck are garlands of leaves and flowers, and on his breast are shining jewels. As Shiva represents destruction, Vishnu represents protection, and his son is the god of love. To carry on the work of protection, he incarnates himself from time to time, and more temples are dedicated nowadays to his most popular incarnations, Rama and Krishna, than to his original personality. Rama is a human figure, with a bow in one of his hands. He is always accompanied by his wife Sita, often by his brother Lakshmana, and at his feet, or standing before him with joined hands, is Hanuman, the monkey chieftain, who assisted him in his expedition against Ravana, the abductor of his wife. Krishna is also a human figure, generally represented as playing on a flute, with which he charmed the damsels of his city, esoterically explained to mean his devotees.

**Brahma** is seldom worshipped: only a couple of temples dedicated to him have yet been discovered in all India.

**Minor Deities.**—The minor gods and goddesses and the deified heroes and heroines who fill the Hindu pantheon, and to whom shrines are erected and worship is offered, constitute a legion. Many of them enjoy a local reputation, are unknown to sacred literature, and are worshipped chiefly by the lower classes. Some of them, though not mentioned in ancient literature, are celebrated in the works of modern saints.

The **Jains** in their temples, adore the sacred personages who founded and developed their sect, and venerate some of the deities common to Hinduism. But their view of Divinity is different from the Hindu conception, and in the opinion of Hindu theologians they are atheists. So also the **Buddhists** of Burma pay almost the same veneration to Prince Siddhartha as if he was a god, and indeed elevate him above the Hindu gods, but from the Hindu standpoint they are also atheists.

**Images.**—Besides invisible powers and deified persons, the Hindus venerate certain animals, trees and inanimate objects. This veneration must have originated in gratitude, fear, wonder, and belief in spirits as the cause of all good or harm. Some of the animals are vehicles of certain gods and goddesses—the eagle of Vishnu; the swan of Brahma; the peacock of Saraswati; Hanuman, the monkey, of Rama: one serpent upholds the earth, another makes Vishnu's bed: elephants support the ends of the universe, besides one such animal being Indra's vehicle: the goddess Durga or Kali rides on a tiger: one of Vishnu's incarnations was partly man and partly lion. The cow is a useful animal: to the Brahman vegetarian her milk is indispensable, and he treats her as his mother. So did the Rishi of old, who often subsisted on milk and fruits and roots. To the agriculturist cattle are indispensable. The snake excites fear. Stones, on which the image of a serpent is carved, may be

seen under many trees by the roadside. The principal trees and plants worshipped are the Sacred Fig or Pipal, the Banyan, the Sacred Basil, the Bilva or Wood Apple, the Asoka, and the Acacia. They are in one way or another associated with some deity. The sun, the moon, and certain planets are among the heavenly bodies venerated. The ocean and certain great rivers are held sacred. Certain mountains, perhaps because they are the abodes of gods and Rishis, are holy. Pebbles from the Gandaki and the Narmada, which have curious lines upon them, are worshipped in many households and temples.

**Worship.**—Without going into a temple, one can get a fair idea of image worship by seeing how a serpent-stone is treated under a tree. It is washed, smeared with sandal, decorated with flowers: food in a vessel is placed before it, lamps are waved, and the worshipper goes round it, and bows down his head, or prostrates himself before the image. In a temple larger bells are used than the small ones that are brought to such a place: jewels are placed on the idol: and the offerings are on a larger scale. Idols are carried in public procession in palanquins or cars. The lower classes sacrifice animals before their gods and goddesses.

**Domestic Life.**—Of the daily domestic life of the people a tourist cannot see much. He may see a marriage or funeral procession. In the former he may notice how a bridegroom or bride is decorated: the latter may shock him, for a Hindu dead body is generally carried on a few pieces of bamboo lashed together: a thin cloth is thrown over it and the body is tied to the frame. The Mahomedan bier is more decent, and resembles the Christian coffin. Some Hindus, however, carry the dead to the burial ground in a palanquin with great pomp. The higher castes cremate the dead: others bury them. Burial is also the custom of the Muslims, and the Parsis expose the dead in Towers of Silence.

## Indian Names.

The personal name of most Hindus denotes a material object, colour, or quality, an animal, a relationship, or a deity. The uneducated man, who cannot correctly pronounce long Sanskrit words, is content to call his child, father, brother, uncle, or mother, or sister, as the case may be. This practice survives among the higher classes as well. Appa Saheb, Anna Rao, Babaji, Bapu Lal, Bhal Shankar, Tatacharya, Jijibhai, are names of this description, with honorific titles added. It is possible that in early society the belief in the re-birth of departed kinsmen lent popularity to this practice. Nothing could be more natural than to call a man white, black, or red: gold or silver: gem, diamond, ruby, pearl, or merely a stone: small or tall, weak or strong: a lion, a snake, a parrot, or a dog: and to name a woman after a flower or a creeper. Thus, to take a few names from the epics, Pandu means

white, and so does Arjuna: Krishna black: Bhima terrible: Nakula a mongoose: Shunaka a dog: Shuka a parrot: Shringa a horn. Among the names prevalent at the present day Hira is a diamond: Ratna or Ratan a jewel: Sonu or Chinna gold: Velli or Belli, in the Dravidian languages, means white metal or silver. Men are often called after the days of the week on which they were born, and hence they bear the names of the seven heavenly bodies concerned. When they begin to assume the names of the Hindu deities, they practically enter upon a new stage of civilisation. It is doubtful whether the Animists ever venture to assume the names of the dreaded spirits worshipped by them. To pronounce the name of a devil is to invite him to do harm. If the spirits sometimes bear the names of human beings, the reason seems to be that they were originally human.

**High-caste practices.**—The high caste Hindu, on the other hand, believes that the more often the name of a deity is on his lips, the more merit he earns. Therefore he deliberately names his children after his gods and goddesses, so that he may have the opportunity of pronouncing the holy names as frequently as possible. These are also sonorous and picturesque. Shiva is happy: Vishnu is a pervader: Govinda is the cowherd: Krishna: Keshava has fine hair: Rama is a delighter: Lakshmana is lucky: Narayana produced the first living being on the primeval waters: Ganesha is the Lord of Shiva's hosts: Dinakara is the luminary that makes the day: Subrahmanya is a brother of Ganesha. Sita is a furrow: Saitri a ray of light: Tara a star: Radha prosperity: Rukmini is she of golden ornaments: Bhama of the glowing heart. Shiva and Vishnu has each got at least a thousand names, and they may be freely drawn upon and paraphrased in naming one's children; and the whole Hindu pantheon is as crowded as it is large. When a mother loses several children, she begins to suspect that some evil spirit has conspired against her and in order to make her off-spring unattractive to the powers of darkness, she gives them ugly names, such as Keru, rubbish, or Ukirda, dunghill, or Martoba, the mortal. Women are named after rivers, as Sarasvati, Ganga, Bhagirathi, Godavari, or Kaveri, just as men are sometimes called after mountains. Manu counsels young men not to choose a wife with such a name, perhaps because a river is an emblem of deviousness and inconstancy, as a hill is an emblem of stability. But the names of rivers have not been discarded. The Burmans have a curious custom: if a child is born on a Monday, its name must begin with a guttural, on Tuesday with a palatal, on Thursday with a labial, on Saturday with a dental.

**Family names.**—When a person rises in importance, he adds to his personal name a family or caste name. It was once the rule that the title Sharma might be added to a Brahman's name, Varma to a Kshatriya's, Gupta to a Vaishya's, and Dasa to a Shudra's. This rule is fairly well observed in the case of the first two titles, but the meaning of the other two has changed. Dasa means a slave or servant, and the proudest Brahman cannot disdain to call himself the servant of some god. Thus, although Kalidas, the famous poet, was a Shudra, Ramadas, the famous guru of Shivaji, was a Brahmin. The Vaishnavas have made this fashion of calling oneself a servant of some god exceedingly popular, and in Western India high caste Hindus of this sect very commonly add Das to their names. The Brahmans of Southern India add Aiyer or Aiyangar to their names. Shastri, Acharya, Bhat, Bhattacharya, Upadhyaya, Mukhopadhyaya, changed in Bengal into Mukerji, are among the titles indicative of the Brahmanical profession of studying and teaching the sacred books. Among warlike classes, like the Rajputs and Sikhs, the title Singh (lion) has become more popular than the ancient Varma. The Sindhi Mal, as in Gidumal, means brave and has the same force. Raja, changed into Raya, Rao and Rai was a political title, and is not confined to any caste. The Bengali family names, like Bose and Ghose,

Dutt and Mitra, Sen and Guha, enable one to identify the caste of their bearers, because the caste of a family or clan cannot be changed. Shet, chief of a guild or a town, becomes Chetty, a Vaishya title, in Southern India. Mudaliyar and Nayudu, meaning leaders, are titles which were assumed by castes of political importance under native rulers. Nayar and Menon are the titles of important castes in Malabar. Ram, Lal, Nand, Chand, are among the additions made to personal names in Northern India. Suffixes like Ji, as in Ramji or Jamshedji, the Kanarese Appa, the Telugu Garu, the feminine Bai or Devi, are honorific. Prefixes like Babu, Baba, Lala, Sodhi, Pandit, Raja, and the Burmese Maung are also honorific.

**Professional names.**—Family names sometimes denote a profession: in some cases they might have been conferred by the old rulers. Mehta, Kulkarni, Deshpande, Chitnavis, Mahanavis are the names of offices held in former times. One family name may mean a flour seller, another a cane-seller, and a third a liquor-seller. To insert the father's name between one's personal and the family name is a common practice in Western India. It is rare elsewhere. When a family comes from a certain place, the suffix 'kar' or 'wallah' is added to the name of the place and it makes a family surname in Western India. Thus we may have Chiplunkars and Suratwallahs, or without these affixes we may have Bhavnagris, Malabaris and Bilimorias, as among Parsis. Thus Vasudev Pandurang Chiplunkar would be a Hindu, whose personal name is Vasudev, father's name Pandurang, and family name derived from the village of Chiplun, is Chiplunkar. In Southern India the village name precedes the personal name. The evolution of Musalman names follows the same lines as Hindu names. But Muslims have no god or goddesses, and their names are derived from their religious and secular history. These names and titles are often as long and picturesque as Hindu appellations. The agnomen Baksh, Din, Ghulam, Khwaje, Fakir, Kazi, Munshi, Sheikh, Syed, Begum, Bibi and others, as well as honorific additions like Khan, have meanings which throw light of Muslim customs and institutions. The Parsis also have no gods and goddesses, and their personal names are generally borrowed from their sacred and secular history. Their surnames frequently indicate a profession or a place, as in the case of Hindus in Western India. Bafillwallah, Readymoney, Contractor, Saklatwallah, Adenwallah and others like them are tell-tale names.

**Conversions.**—As a rule, a child is named soon after it is born, and in the case of males the appellation is not changed. The higher Hindu castes have a separate ceremony called the name-giving ceremony performed on the twelfth day after birth. When a girl is married in these castes, the husband's family give her a new personal name. When a boy is invested with the sacred thread and is made a twice-born, his name is not changed, but when a man joins an order of ascetics, his lay name is dropped, and he assumes a new name. So also when a Burman joins an order of monks or nuns, the lay name is superseded by a Pali name. Christian converts change their original name when they are baptised.

## Big Game Hunting.

From the earliest times India has been famous as a land affording ample pastime for the mighty hunter before the Lord. No country, not even Africa, has afforded a greater variety of desirable game. The great oxen of India, the gaur, the buffalo, and the yak found upon its northern confines, are unequalled by the bovine animals of any land. The big horn and the white goat of the Rocky Mountains are beyond all measure inferior to the fine sheep and goats that inhabit the precipitous fastnesses of the Himalayas and the Tibetan plains beyond, which though not within the limits of our Eastern Empire, are accessible to sportsmen from India. The tiger has been adjudged by experienced observers to be the greatest and most imposing of felines, to whom even the maned lion must give place, both as regards beauty, size, ferocity and offensive armature; nor is the lion unknown in India, though sadly diminished in numbers and in range of habitat. The Indian elephant is perhaps inferior in size, though superior in point of utility to his African congener; and India possesses four species of bears which find no counterpart in the Dark Continent. Africa again, although abounding in a vast variety of antelopes, can show no stag equal to the bharu singh, the sambar, and the spotted deer, whilst among all its tribe of antelopes none surpasses the black buck in grace and beauty.

Although the quantity of big game in India has decreased considerably during recent years, there is still no lack of sport for those who have the will to travel far in search of it. The sportsman from Europe, unacquainted with the language and country, will find great difficulty in carrying out expeditions in pursuit of big game unless he is provided with suitable introductions. But with the aid of friends among the officials it is still possible for the keen hunter to obtain good sport, although for the best of it he must remain in India during at least a portion of the hot season of the year. It is then that the tigers, which have been wandering over extensive areas during the cold weather, may be more easily brought to bag, for the jungle has thinned out, and the great beasts, impatient of thirst, have to frequent the vicinity of water which, away from the rivers, is now confined to scanty pools. For hunting the gaur or bison, perhaps the early part of the rainy season is best, when the leaves that in dry weather crackle so loudly under foot have been softened by the fall of the rain. But they also, and buffaloes, bears and leopards may well be sought for in the hot weather, when the forest, stripped of its leaves, affords them little concealment. The stags, which cast their antlers annually, must of course be hunted at the proper season, the spotted deer in the hot weather and other species during the cold season of the year. The great horned game of the Himalayas, the ibex, markhor, and the fine sheep to be found in the mountain fastnesses and in the trans-Himalayan regions must be looked for when the snow admits of the sportsmen reaching their habitat. Kashmir may well be revisited in March, but the passes that lead to the roof of the world, where *ovis*

*ammon* and *ovis poli* are to be found will probably not be open before June or July.

**Hunting grounds** are to be found throughout the length and breadth of India. Mysore and Burma produce the finest bison, but these splendid animals, though strictly preserved; are to be found also in the forests of the Satpura Hills, that paradise of big game. The sportsman with a year at his disposal, provided he has suitable introductions and is prepared to work hard, should be able to secure specimens of most of the game animals of India. He might well begin in January in the Central Provinces, where he would find black buck, gazelle, Nilgai, and a variety of small game in the open country, and where there should be no difficulty in securing some panthers and sloth bears, sambar, spotted deer and swamp deer. In the hills also he will find barking deer and four horned antelope, while tigers are not uncommon, and in remoter parts buffalo may be met with. About the middle of March the sportsman could go on to Kashmir, and find there brown and black bears, ibex, markhor and shapoo or oriol, before crossing into Tibet. He might be fortunate enough to come across a stag that had not yet cast its antlers, and falling this, he could get his stag on the return journey towards the end of October, or in November. If he has more time at his disposal, Burma might well be visited, for there are found several species not to be obtained in India, such as the tame, the browantlered deer, and the Malayan bear, and elephants and rhinoceros might perhaps be met with; but this would probably entail an extension of the tour considerably in excess of the twelve months.

It is not advisable to lay down the law as to **rifle and equipment**, but the sportsmen may be recommended not to use small-bore rifles for dangerous game. A 450 cordite rifle should suffice for big game, and a smaller bore for antelope and gazelle, while a 12-bore gun will be found most useful for feathered game.

The regulations as to the **importation, etc., of arms** include in Bombay the following:—

A dealer in arms and ammunition intending to import the same into Bombay must first obtain from the Commissioner of Police a license on payment of Rs. 10. Arms and ammunition may be sold by dealers, to Europeans (excluding Germans, Austrians and Turks), Anglo Indians (Eurasians), Volunteers (not exempt under item 13, Schedule I, Indian Arms Act Rules), title holders, etc., in reasonable quantities, or in such quantities as Government may lay down, and for the personal use of the purchaser. During the war no dealer can sell arms or ammunition to any person without a "pass" to be obtained from the Commissioner of Police, Bombay. Non-exempted persons may be licensed by the Commissioner of Police to possess certain arms and ammunition. They can possess such arms and ammunition only as are mentioned in their license. Exempted persons may import arms and ammunition in reasonable quantities without a license, but the weapons, etc., must be declared before the Customs officer on duty.



## Routes between India and Europe.

The Indian port for the direct journey to and from Europe is Bombay. There are six lines of steamers by which the journey to and from the West *via* Bombay can be performed, either by sea all the way or—and in some cases only—by sea part of the way and by rail across Europe. They are the P. & O., the Anchor Line, the City and Hall Line, and the Marittima Italiana (Italian Mail S. N. Co.). The British India line have an occasional service to London. The Natal line steamers are available for Western passages only the steamers sailing round the Cape on their Eastward voyages. There are other services between Calcutta and the West, by steamers sailing round Ceylon, and several lines connect Colombo with Europe. Of the latter the Orient,† the Messageries Maritimes (which also sailed from Bombay at fortnightly intervals before the war) and the Bibby Lines are the chief, besides the P. & O. The Bibby service extends to Rangoon. The new railway between India and Ceylon greatly increases the importance of the Colombo route for Southern India. The shortest time between London and Bombay is 14 days.

The war has in some cases seriously interfered with the regularity of the services.

### The P. & O.

The P. & O. steamers run weekly from Bombay and London, leaving Bombay on

The following are the Ticket rates from Bombay to Europe:—

From Bombay (or Karachi)	Single Ticket.						Return Ticket (valid 2 years).					
	1st Saloon.			2nd Saloon			1st Saloon.		2nd Saloon.			
	"A"	"B"	"C"	"A"	"B"		"A"	"B"	"C"	"A"	"B"	
	Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	
To London by sea .. ..	900	810	720	660	570		1,350	1,215	1,080	990	855	
To Marseilles, Malta, or Gibraltar. .. ..	810	750	660	630	540		1,260	1,125	990	945	810	
To London <i>via</i> Marseilles, with ordinary rail ticket ..	912	852	762	700	610		1,464	1,329	1,194	1,085	950	
To Marseilles and returning from London by sea .. ..	..	..	.	.	.		1,305	1,170	1,035	967-8	832-8	
To London <i>via</i> Marseilles, and including Special Express (rail and sleeping car ticket).	998	908	818	788	698		1,596	1,441	1,306	1,261	1,126	

Free tickets are issued to Karachi passengers by B. I. S. N. Co.'s steamers between Bombay and Karachi for either eastward or westward voyage. The transfer from the B. I. steamer to the P. & O. steamer, or *vice versa*, is made in Bombay harbour by launch, without going ashore. The first saloon inside cabins on the Main deck of the Mail Steamers are let at a reduced rate.

First Saloon passengers are allowed 8 cwt. of personal Baggage free of Freight; Second Saloon passengers and servants 1½ cwt. each; Children over three and under 12 years of age half these weights; Ayahs and other native servants 1½ cwt. each free.

† The Orient Line at present are running their steamers *via* the Cape and are omitting the call at Colombo both Homeward and Outward.

Sunday and London on Saturday. Alternate sailings each way are direct. In other weeks a special steamer runs from Bombay to Aden where it connects with the Australian Homeward Mail and similarly, for the outward voyage, passengers and baggage and mails are transferred on alternate weeks to a steamer at Aden which proceeds thence direct to Bombay. The P. & O. carry the postal mails. The steamers call at Aden, Port Said, Marseilles, and Gibraltar. Passengers are not usually allowed to land at Aden but there is ordinarily time for them to spend some hours ashore at Port Said and Marseilles and a shorter time at Gibraltar. Passengers may travel westward from Port Said by any of the following methods:—

By the liner to Marseilles; thence by special P. & O. express to Boulogne and so by Falkestone to London; or

By Liner to Tilbury Dock.

The arrangements for the eastward voyage are similar, in reverse order.

Before the changes necessitated by the war, passengers could proceed homeward from Port Said by fast special steamer to Brindisi and thence overland by special or express train, or could continue from Port Said by liner and land at Plymouth. Both arrangements are now suspended.

## Anchor Line.

The Anchor Line steamers run between Bombay and Liverpool and there are ordinarily two steamers each way per month. Westward-bound steamers call at Marseilles, so that passengers can leave the ship there if they wish. After the War calls will be made at Marseilles on the Outward and Homeward journeys. Other calls are at Port Said and Gibraltar. Eastward bound steamers do not call at Marseilles. Free tickets by B. I. S. N. Co.'s steamers are issued to Karachi passengers to and from Bombay. The passage rates westward from Bombay are as follows:—

From Bombay (or Karachi).	Single Ticket.		Return Ticket (valid 2 years).	
	Saloon.	Native Servant.	Saloon.	Native Servant.
	Rs.	Rs.	Rs.	Rs.
To Marseilles .. .. .	555	248	....	....
„ Liverpool .. .. .	600	263	900	395
„ London overland from Marseilles (1st class rail) and returning from Liverpool .. .. .	630	298 (3rd rail)	942	434 3rd rail)
„ New York via Liverpool and Glasgow.	867	....	1,433	....

Some sailings are made homeward *via* Genoa, fares by this route being, Single fare to Genoa Rs. 525 and to Glasgow Rs. 600. Passengers are allowed to take free of charge, 40 cubic feet of baggage, excess being charged at the rate of a shilling per cubic foot. Dogs are carried and the charge for them is Rs. 50 per animal—arrangements must be made with the ship's butcher as to feeding.

The voyage Bombay to Liverpool occupies approximately 30 days. Bombay Agents, W. & A. Graham & Co.

## Ellerman's "City" & "Hall" Lines.

The City and Hall Liners sail westward for the most part from Karachi, *via* Bombay. Some ships go direct from one port and others direct from the other. They sail to Liverpool and passengers can be booked *via* Marseilles and Overland either Eastward or Westward. Most of the steamers have both first and second class accommodation. Others have one class only. Passengers booking their berths in Karachi for steamers sailing from Bombay are given free tickets from Karachi to Bombay by a British India S. N. Co.'s steamer. They are transferred immediately on arrival in Bombay to the Ellerman liner if she is sailing the same day; otherwise they are landed and at the same time informed as to when the steamer for Europe sails.

Adult 1st class passengers are allowed 3 cwt. of luggage free, subject to a limit in measurement of 40 feet. Children and European servants travelling first class are allowed half that quantity. Children and native servants travelling 2nd class are allowed 60 lbs. Bicycles in crates or cases are specially charged for.

Fares from Karachi or Bombay:—

From Bombay or Karachi.	Single Ticket.			Return Ticket (valid 2 years).		
	1st Saloon.	2nd Saloon.	Native Servant.	1st Saloon.	2nd Saloon.	Native Servant.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
To Marseilles .. .. .	555	420	248	833	630	375
„ Liverpool .. .. .	600	460	26	900	675	395
„ London <i>via</i> Marseilles (with rail) ..	630	480	29	1,033	790	434
„ Marseilles, returning from Liverpool ..	..	..	..	867	653	385

## Rubattino.

Monthly sailings from Bombay for Catania, Messina, Naples, Leghorn and Genoa, Messina ordinarily being reached on the 14th day, Naples on the 15th and Genoa on the 17th. The usual baggage allowances are made and baggage is conveyed free by sea from Port Said to London.

FARES FROM BOMBAY.	Single.			Return (valid 2 years).		
	First* Saloon.	Second Saloon.	Indian Servant.	First* Saloon.	Second Saloon.	Indian Servants.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
To Catania, Messina, Naples, Leghorn and Genoa .. .. .	450	350	180	675	525	277-8
Do. (Protestant Missionary rate) ..	427-8	325	..	600	..	..
Do. (European Hospital Nurse)...	400	..	..	600	..	..
To London <i>via</i> Genoa, Turin, Paris, Calais and Dover .. .. .	500-8	427	..	896	678	..
To London <i>via</i> Genoa, Turin, Paris, Dieppe and Newhaven .. .. .	546	417	..	867	659	..

\*Rs. 50 is charged for berth in a single berth cabin ; Rs. 75 on a return ticket.

The Messageries Maritimes and Marittimi Italiana have a joint arrangement by which passengers taking return tickets may travel one way by one line and back by the other.

## Natal Line.

The steamers make their eastward voyages round South Africa. Westward sailings from Bombay to Weymouth usually once a month during the season.

Fares, Bombay to Weymouth (25 days):—First class, Rs. 375 to Rs. 420, according to class of steamer and position of berth. Cheap first class tickets are issued for berths in 2, 3, and 4 berth cabins.

## Bibby Line.

Two (in the season, sometimes three) sailings monthly from Rangoon, *via* Colombo and Marseilles, to Liverpool. Fares from Rangoon and Colombo :—

	Single.		Return.		
	1st Class.		1st Class, available for 4 months from Rangoon.	1st Class, avail- able for 2 years.	
	From Rangoon	From Colombo		From Rangoon	From Colombo
	Rs.	Rs.	Rs.	Rs.	Rs.
To Marseilles .. .. .	625	600	900	1,050	825
To London by sea returning from Liverpool ..	675	630	1,000	1,100	875
To London by sea returning from London <i>via</i> Marseilles.	..	..	1,200	1,075	1,000
To London <i>via</i> Marseilles .. .. .	700	675	1,100	1,250	1,050
To Marseilles returning from Liverpool by sea.	..	..	1,000	1,125	925
To London by sea returning from Marseilles ..	..	..	1,000	1,125	925

Free 1st class tickets, Talahmannar—Colombo are given to passengers from South India.

**Orient Line. †**

Fortnightly sailings (Australasian Mail) on Thursdays from Colombo to Port Said, Naples, Marseilles, Plymouth and London. Fares from Colombo :—

From Colombo to	1st Saloon.		2nd Saloon.		Native Servants.	
	Single.	Return 2 years.	Single.	Return 2 years.	Single.	Return 2 years.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Suez and Port Said .. .. .	{ 600 660 780 }	{ 900 990 1,170 }	510 600	765 900	{ 210 }	315
Naples, Marseilles and Gibraltar ..	{ 660 720 810 }	{ 990 1,080 1,260 }	540 630	810 915	{ 210 }	315
Plymouth and London .. .. .	{ 690 750 900 }	{ 1,035 1,125 1,350 }	570 660	855 990	{ 240 }	360

Concessions for tickets, Talalmanuar—Colombo, are given to South India passengers. Tickets are issued for native servants.

† The Orient Line at present are running their steamers *via* the Cape and are omitting the call at Colombo both Homeward and Outward.

It used to be possible to obtain cheap passages, eastward or westward, in cargo ("tramp") steamers. These are now next to impossible to secure, because as the steamers are not licensed to carry passengers, passengers have to sign on as members of the crew, and the recent extension of the Employers' Liability Act then involves the ship's owners in liability to compensation to them for a variety of causes.

**Indian Train Service.**

The distances and railway fares from Bombay to the principal centres of other parts of India are as follows :—

	Miles.	1st Class.	2nd Class
		Rs. a.	Rs. a.
Delhi, B.B. & C.I. Railway, <i>via</i> new Nagda-Muttra direct route .. .. .	865 (28 hours)	86 4	33 3
Delhi, G. I. P. Railway, <i>via</i> Agra .. .. .	957 (28 hours)	66 4	33 3
Simla, <i>via</i> Delhi .. .. .	1,137	103 5	52 11
Calcutta, G.I.P. from Bombay, <i>via</i> Jubbulpore & Allahabad..	1,349	99 1	49 9
Calcutta, G. I. P. from Bombay, <i>via</i> Nagpur .. .. .	1,223	91 1½	45 9½
Madras, G. I. P. from Bombay, <i>via</i> Raichur .. .. .	794	68 0	34 4
Lahore, <i>via</i> Delhi .. .. .	1,102	94 2	47 2

## THE SUEZ CANAL.

The annual report of the **Suez Canal Company** published in May, 1916, states that the total receipts for 1915 amounted to 98,228,098*f*. (£3,929,128), a decrease of 26,893,138*f*. (£1,075,725) as compared with 1914. The excess of revenue over expenditure, including the amount brought forward, was 73,021,375*f*. (£2,920,855), as against 89,359,898*f*. (£3,214,305). It was proposed to distribute 61,507,887*f*. (£2,402,715), and to carry forward the balance of 11,453,488*f*. (£458,139), which compares with 18,703,500*f*. (£748,140) brought in. The distribution had the effect of bringing the dividend on each share to 109*f*. 28*c*., which, with interest of 25*f*., represents a gross return of 134*f*. 28*c*., and a net return of 120*f*. (£4 16*s*.).

The **dues** which the Canal Company was authorised to charge by its concession of 1856 were 10 francs a ton, charged on the gross register tonnage. To these objections were soon

raised and as the result of an international Conference at Constantinople in 1873 the dues were fixed at 10 francs per net register ton with a surtax of 4 francs—afterwards reduced to 3. British shipowners still found the dues excessive and a meeting of their representatives and those of the Canal Company in 1883 agreed that in 1885 the dues should be reduced to 9½ francs a ton, that subsequently they should be lowered on a sliding scale as the canal dividend increased, and that after the dividend reached 25 per cent. all the surplus profits should be applied in reducing the rates until they were lowered to 5 francs a ton. Under this arrangement dues were fixed at 7½ francs per ton at the beginning of 1906, and at the outbreak of war were as low as 6½ francs a ton, where they remained until October, 1916, when they were raised by ½ franc a ton.

Below are set out the 12 **principal users** in point of tonnage, of which eight were British, two were Dutch, one was French, and one was Japanese. In 1914 three German lines—the *Hansa*, *Hamburg-Amerika*, and *Norddeutscher*—appeared among the first 12 users in spite of the fact that the war was in progress for five months. In 1915, of course, no vessels flying the German flag passed through the Canal.

Owners.						Tonnage.	Voyages.
Peninsular and Oriental	..	..	..	..	1,101,000	1,955,000	390
British India	..	..	..	..	854,000		
Ellerman Lines:—						1,142,000	248
Hall Line	..	..	..	..	580,000		
City Line	..	..	..	..	200,000		
Bucknall Lines	..	..	..	..	240,000		
Autres	..	..	..	..	56,000		
Alfred Holt & Co., (Ocean and China Mutual)	..	..	..	..	1,103,000		215
Nederland Stoomvaart Maatschappij	..	..	..	..	650,000		134
Rotterdamsche Lloyd	..	..	..	..	483,000		120
Messageries Maritimes	..	..	..	..	464,000		121
Nippon Yusen Kaisha	..	..	..	..	433,000		71
Cayzer, Irvine, and Co.	..	..	..	..	361,000		108
T. and J. Harrison	..	..	..	..	288,000		63
P. Henderson & Co.	..	..	..	..	241,000		52
Bibby Bros. & Co.	..	..	..	..	225,000		42

**Improvement Schemes.**—It was announced in 1914 that from and after January 1st, 1915, the maximum draught of water allowed to ships going through the Suez Canal would be increased by 1ft., making it 30ft. English.

The maximum permissible draught of ships using the Canal was 24·4 feet in 1870; in 1890 ships drawing 25·4 feet could make the passage; and during the following 24 years the increase has been at the average rate of about 1 foot every six years, thus bringing the maximum draught authorized to 29 feet.

The scheme of improvement adopted by the Company on the recommendation of the International Consultative Committee of Works, the British representatives on which are Sir William Matthews and Mr. Anthony Lister, is a comprehensive one, and the details suggest that it will meet the needs of the big ship.

**A 40 feet Channel.**—The declared policy of the Canal Company in regard to the deepening of the Canal is to offer a slightly greater depth of water than that available in ports east of Suez. It is claimed that, with the exception of Sydney, there is no eastern port which at low tide has a greater depth of water than that now provided in the Canal throughout the full length of nearly 105 miles. In any case the work in hand should meet the needs of any ship likely to be built for the eastern trade during the next few years.

When the Canal was opened in 1869, the width was 72 feet and the depth about 26 feet 2 inches. In June, 1913, the width at a depth of 32 feet 8 inches had been increased to a minimum of 147 feet 6 inches over a length of about 85 miles, and to a width of 328 feet over a distance of about 20 miles. The latest scheme makes provision for a depth of 40 feet throughout and for a widening up to 196 feet 8 inches in the south section, and the cutting of an appropriate number of sidings in the north and central sections, where a minimum width of 147 feet 6 inches is believed to be sufficient for the requirements of the immediate future.

The work of enlarging the capacity of the Canal presents no special difficulty on the engineering side. A good deal of sand is occasionally driven into the channel at Port Said during storms, but a remedy for this will be found in extension of the west breakwater by about 2,700 yards at a cost of over £6,000,000. The construction of this extension, which has been in hand for the past two years, is making satis-

factory progress. The Suez Roads are being adequately dredged in accordance with an agreement between the Egyptian Government and the Company.

Almost up to the end of 1915 the works for extending the jetty to the west of Port Said, works of capital importance for the protection of the entry to the Canal, were pushed on uninterruptedly. In November, however, for want of hydraulic lime, the manufacture of artificial rocks for this jetty was interrupted. The submarine foundations in stone and rubble of the new jetty were, as a matter of fact, completed to a length of 2,500 metres; the protective blocks were laid for 1,040 metres, and cemented for over 800 metres. The protection of the Channel is thus secured, and there is no need for any apprehension as to its future.

**The Canal in war time.**—On October 22, 1914, the British Government issued a notification in the following terms to the representatives of foreign maritime Powers in London, and asked them to communicate it to their Governments:

"Since the outbreak of war certain ships of enemy countries have remained in the Suez Canal.

"Some of these vessels were detained by the Egyptian Government on account of hostile acts committed in the Canal; some because there was reason to apprehend that they contemplated hostile acts; others, though perfectly free, have refused to leave the Canal in spite of the offer of a free pass, thus disclosing their intention to use the ports of the Canal merely as ports of refuge, a measure which is not contemplated by the Suez Canal Convention.

"His Majesty's Government do not admit that the Conventional right of free access and use of the Canal enjoyed by merchant vessels implies any right to make use of the Canal and its ports of access for an indefinite time to escape capture, since the obvious result of permitting any such course must be greatly to incommode and even to block the use of the ports and Canal by other ships, and they are consequently of opinion that the Egyptian Government are fully justified in the steps which they are taking to remove from the Canal all enemy ships which have been long enough in the Canal ports to show clearly that they have no intention of departing in the ordinary way, and that they are putting the Canal and its ports to a use which is inconsistent with the use of the Canal in the ordinary way by other shipping."

## Travel in India.

Twenty years ago, a tour in India was possible only to the wealthy, the leisured and those who had friends in the country. The cost of the journey was very high, the methods of transportation were very slow; and the facilities for travel were so indifferent that it was a bold man who consigned himself to the mercies of the country without a sheaf of letters of introduction. Now the mail which in peace time is posted in London on Friday night, reaches Bombay in thirteen and a half days, and the passenger can travel by the same route and with the same speed as the mail. A dozen lines have covered the sea route between Europe and India and Ceylon with a plexus of regular services. The Indian Railways provide facilities on the trunk lines unsurpassed by the *trains-de-luxe* of Europe, and the Indian hotel has grown into a really comfortable caravan-sal.

In the touring season, which extends from November to March, there is the attraction of a perfect climate. It is never very hot; in the North indeed it is really cool, it is always fine and fresh and bracing. If there is one country in the world to which that elusive term applies, here we have at the season when the tourist arrives the real "Indian summer." Then there is its infinite variety. India is in no sense a nation and never will be. Its people are wide as the Poles asunder, each has its own art, its own architecture, its own customs and its own civilisation. A certain superficial resemblance runs through each; beneath lies a never-ending variety which age cannot wither nor custom stale.

**The Ground Tour.**—People coming to India for the first time so often ask:—"Where shall I go?" Well, wherever else the tourist may go, whatever else he should leave out, he should omit nothing on the Grand Tour. It is the foolish custom nowadays to sneer at those who follow the beaten tracks, but the visitor who shuns any part of the orthodox journey across India misses what nothing else can repay. **Bombay** is by far the most convenient point of departure, for here "the world end steamers wait," here is one of the finest cities in the British Empire, and here the traveller can best complete his outfit and arrangements. From **Bombay** stretch northwards the two great trunk lines of India. One, the **Bombay Baroda & Central India Railway**, leads through the pleasant garden of Gujarat to Ahmedabad,

the ancient Moslem capital of the Province, containing fine examples of Mahomedans and Jain architecture; thence to Abu for the famous Jain temples of Dilwara, and on to Ajmere, Jaipur and Agra. The other by the **Great Indian Peninsula Railway** carries the tourist over the Western Ghats by a superb mountain railway to Gwalior, whose rock fortress rises like a giant battleship from the plain, and so on to Agra. Of the glories of the Taj Mahal, Agra Fort, and the deserted city of Fatehpur Sikri it were supererogatory to speak. Another easy stage leads to **Delhi** that amazing collection of cities, dominated by the little Ridge where British valour kept the mutinous hordes at bay, and finally drove them from the city by a feat of arms unsurpassed in history. Then from Delhi the East Indian line leads comfortably to Benares, Lucknow and Calcutta, with the opportunity of an excursion to Cawnpore, if the spirit moves. The great charm of the Grand Tour is that it reveals the best that India can show. This route has the additional advantage that it fits in with any digressions which the time and purse of the traveller may permit. No one who can spare the time should fail to push northwards from Delhi to Peshawar, where the flower of the army keeps watch and ward over the Khyber, and up the drad Pass to the eyrie where the foot of Ali Masjid bars the way to all invaders. **Calcutta** is the best starting point for Dargeling, though unfortunately the magnificent mountain panorama visible from there is often obscured at this season by mists. Then from Calcutta two alternatives open. A fine service of mail steamers leads to **Burma**, and one of the unforgettable memories of the East is a voyage down the Irrawaddy from Bhamo or Mandalay to Prome. Again, either direct from Calcutta, or *via* Burma, is an easy route to **Madras** and by way of Madura and Trichinopoly, with their peerless Hindu temples, back to Bombay, or on through Tuticorin to **Colombo**. But indeed the possibilities of expanding this tour are endless. Bombay is the best centre for the rock temples of Elephanta, Kenheri, Karli, Ellora and Ajanta. Calcutta is only a short distance from Puri the one Indian temple where there is no caste, and perhaps the most remarkable Hindu temple in the country. From Calcutta also start the river steamers which thread the steamy plains of Bengal and run to the tea gardens of Assam.

## SPECIMEN TOURS.

A number of specimen tours in India are given below. They are taken from one of the publications of Thos. Cook and Son, from whom further information may be obtained. The traveller

will also find he can obtain assistance from the principal Shipping Agents and Railway Companies, or from Messrs. Cox & Co., Messrs. Grindlay & Co., and Messrs. King, King & Co.

	1st Class.	2nd Class Rail, 1st Class Steamer.
<b>FROM BOMBAY TO CALCUTTA.</b>		
<i>Via the North-West Provinces to Calcutta (including side trip from Calcutta to Darjeeling).</i>	Rs. a.	Rs. a.
TOUR I.—From Bombay per B. B. & C. I. Railway via Ahmedabad, Abu Road (for Mount Abu), Ajmer, Jaipur, Delhi, Agra, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta .. .. .	210 6	105 5
TOUR II.—From Bombay per G. I. P. Railway via Itarsi, Gwalior, Agra, Delhi, Tundia Junction, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta .. .. .	213 9	106 15
<b>FROM BOMBAY TO COLOMBO.</b>		
<i>Via the North-West Provinces, Calcutta and Southern India to Colombo (including side trip from Calcutta to Darjeeling).</i>		
TOUR III.—From Bombay as in Tour No. I (via B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence via Khurda Road, for Puri (Jugganath), Madras, Tanjore, Trichinopoly, Madura, Danushkodi and Talaimannar to Colombo .. .. .	329 2	164 14
TOUR IV.—From Bombay as in Tour No. II (via G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence as in Tour No. III to Colombo (via Southern India) .. .. .	332 5	166 8
<i>Via the North-West Provinces, Calcutta (including Darjeeling), Burma and Southern India.</i>		
TOUR V.—From Bombay as in Tour No. I (via B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay. Irrawaddy Steamer to Prome, Rail to Rangoon; British India Steamer to Madras, Rail via Tanjore, Trichinopoly, Madura to Danushkodi; Steamer to Talaimannar and Rail to Colombo .. .. .	500 15	304 11
TOUR VI.—From Bombay as in Tour No. II (via G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, thence as in Tour No. V to Colombo .. .. .	513 2	366 8
<b>FROM BOMBAY TO RANGOON.</b>		
<i>Via the North-West Provinces and Calcutta to Rangoon (including a tour in Burma, also including a side trip from Calcutta to Darjeeling).</i>		
TOUR VII.—From Bombay as in Tour No. I (via B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay, Irrawaddy Steamer to Prome, Rail to Rangoon .. .. .	383 2	261 0
TOUR VIII.—From Bombay as in Tour II (via G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon. Rail to Mandalay, Irrawaddy, Steamer to Prome, Rail to Rangoon .. .. .	386 5	262 10



	1st Class.	2nd Class Rail, 1st Class Steamer.
<b>FROM CALCUTTA TO BOMBAY.</b> <i>Via the North-West Provinces.</i>		
TOUR IX.—From Calcutta <i>via</i> Benares, Lucknow, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu), Ahmedabad and Baroda to Bombay ..	143 1	71 10
TOUR X.—From Calcutta <i>via</i> Benares, Moghal Serai, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur Ajmer (for Udaipur), Abu Road (for Mt. Abu) Ahmedabad and Baroda to Bombay ..	133 14	67 0
TOUR XI.—From Calcutta <i>via</i> Benares, Moghal Serai, Cawnpore, Tundla, Agra, Gwalior and Itarsi to Bombay ..	118 8	59 2
TOUR XII.—From Calcutta <i>via</i> Benares, Moghal Serai, Cawnpore, Delhi, Muttra, Agra, Gwalior and Itarsi to Bombay ..	133 8	66 14
<b>CIRCULAR TOUR FROM CALCUTTA.</b>		
TOUR XIII.—From Calcutta <i>via</i> Benares, Lucknow, Cawnpore, Tundla, Agra, Bandikui, Jaipur, Delhi, and Allahabad to Calcutta ..	167 7	83 13
<i>Extensions, Via Southern India to Colombo.</i>		
TOUR XIV.—From Bombay <i>via</i> Poona, Hyderabad, Wadi, Raichur, Madras, Tanjore, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo ..	130 7	62 10
TOUR XV.—From Bombay <i>via</i> Poona, Hyderabad, Wadi, Guntakal, Bangalore, Erode, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo ..	122 7	58 8
<i>Extensions to above Tours.</i>		
From Ajmer to Udaipur and return ..	31 5	15 10
From Abu Road to Mount Abu and return, one seat in Tonga (This excursion is strongly recommended, the scenery being very beautiful) ..	7 0	....
From Delhi to Lahore and return <i>via</i> Umballa and Amritsar ..	41 13	20 15
From Delhi <i>via</i> Bhatinda, Ferozepore to Lahore, returning <i>via</i> Amritsar Umballa to Delhi ..	41 13	20 15
From Calcutta to Darjeeling and return (14 days) ..	87 5	33 11
From Colombo to Kandy and return ..	9 0	6 0
From Kurda Road to Puri (Jagganath and return) ..	5 4	2 10

(All fares subject to change without previous notice.)

### LIST OF HOTELS IN INDIA.

The following list of hotels is largely based on information kindly supplied by Messrs. Thos. Cook & Son, Bombay.—

AGRA.—Ocell, Laurie's Great Northern, Metropole.

AMHEDABAD.—Grand, Empire.

BANGALORE.—West End, Cubbon.

BENARES.—Clark's Hotel de Paris.

BOMBAY.—Taj Mahal, Majestic, Great Western, Apollo, Watson's.

CALCUTTA.—Great Eastern, Grand, Spence's, Continental.

CAWNPORE.—Civil and Military.

DELHI.—Maiden's, Metropolitan, Cecil, Civil and Military, Woodlands.

GULMARG.—Nedou's.

HYDERABAD (Deccan).—Montgomery's.

JAYPORE.—Jeypore, Kalsar-i-Hind, The New Hotel.

JUBBULPORE.—Jackson's.

KARACHI.—North-Western, Killarney.

LAHORE.—Nedou's, Cecil, Falctti's.

LUCKNOW.—Royal, Carlton, Imperial, Civil and Military.

MADRAS.—Hotel D'Angells, Spencer's Military, Connemara, Brind's.

MANDALAY.—Salween House.

MEERUT.—Empress.

PESHAWAR.—Flashmans.

POONA.—Napier, Poona, Connaught.

RANGOON.—Strand, Royal, Minto Mansions

RAWAL PINDI.—Flashmans, Imperial.

SEONDERRABAD.—Montgomery's.

**HOTELS IN PRINCIPAL HILL STATIONS.**

COONOOR.—Glenview.

DARJEELING.—Woodland's, Mount Everest,

Grand (Rockville), Drum Druid.

MAHABLESHWAR.—Race View, Ripon.

MATHERAN.—Rugby.

MOUNT ABU.—Rajputana.

MURREE.—Powell's, Rowbury's, Viewforth.

MUSSOORIE.—Charleville, Savoy.

NAINI TAL.—Metropole, Grand.

OCTACAMUND.—Syk's, Centre, Firgrove.

PACHMARHI.—Hill.

SIMLA.—Corstorphon's, Grand, Lauries, Longwood, Falctti's, Royal.

# An Indian Glossary.

**ASHARI.**—Excess of liquors and drugs.

**AIN.**—A timber tree, *TERMINALIA TOMENTOSA*.

**AMIL.**—A subordinate executive official under native rule; in Sind the name is still applied to Hindus of the clerical class.

**ANIOUT.**—A dam or weir across a river for irrigation purposes, Southern India.

**ANJUMAN.**—A communal gathering of Mahomedans.

**APHUS.**—Believed to be a corruption of ALPHONSE, the name of the best variety of Bombay mango.

**AUS.**—The early rice crop, Bengal; syn. *Ahu*, Assam.

**AVATAR.**—An incarnation of Vishnu.

**BABU.**—(1) A gentleman in Bengal, corresponding to Pant in the Deccan and Konkani. (2) Thence used by Anglo-Indians of a clerk or accountant.

**BABUL.**—A common thorny tree, the bark of which is used for tanning, *ACACIA ARABICA*.

**BAGHLA.**—(1) A native boat (*Buggalow*). (2) The common pond heron or paddybird.

**BAIRAGI.**—A Hindu religious mendicant.

**BAJRA or BAJRI.**—The bulrush millet, a common food-grain, *Pennisetum typhoides*; syn. *cambu*, Madras.

**BAND.**—A dam or embankment (*Bund*).

**BANYAN.**—A species of fig-tree, *Ficus bengalensis*.

**BARSAT.**—(1) A fall of rain, (2) the rainy season.

**BASTI.**—(1) A village, or collection of huts, (2) A Jain temple, Kanara.

**BATTA.**—Lit. 'discount,' and hence allowances by way of compensation.

**BAZAR.**—(1) A street lined with shops, India proper; (2) a covered market, Burma.

**BER.**—A thorny shrub bearing a fruit like a small plum, *Zizyphus jujuba*.

**BEWAR.**—Name in Central Provinces for shifting cultivation in jungles and hill-sides; syn. *taungya*, Burma; *jhum*, North-Eastern India.

**BHADOI.**—Early autumn crop, Northern India, reaped in the month Bhadon.

**BHANG.**—The dried leaves of the hemp plant, *Cannabis sativa*, a narcotic.

**BHANWAR.**—Light sandy soil; syn. *bhur*.

**BHARAL.**—A Himalayan wild sheep, *Ovis montanus*.

**BHENDI.**—A succulent vegetable (*Hibiscus esculentus*).

**BHUSA.**—Chaff, for fodder.

**BHUT.**—The spirit of departed persons.

**BIDRI.**—A class of ornamental metalwork in which blackened pewter is inlaid with silver named from the town of Bidar, Hyderabad.

**BIGHA.**—A measure of land, varying widely the standard bigha is generally five-eighths of an acre.

**BIR (Bid).**—A grassland—North India.

**BLACK COTTON SOIL.**—A dark-coloured soil very retentive of moisture, found in Central and Southern India.

**BOARD OF REVENUE.**—The chief controlling revenue authority in Bengal, the United Provinces and Madras.

**BOR.**—See *BER*.

**BRINJAL.**—A vegetable, *Solanum melongena*; syn. *egg-plant*.

**BUNDER, or bandar.**—A harbour or port.

**BURUJ.**—A bastion in a line of battlements.

**CADJAN.**—Palm leaves, used for thatch.

**CHABUTRA.**—A platform of mud or plastered brick, used for social gatherings, Northern India.

**CHADAR.**—A sheet worn as a shawl by men and sometimes by women. (*Chudder*.)

**CHAITYA.**—An ancient Buddhist chapel.

**CHAMBAR (CHAMAR).**—A caste whose trade is to tan leather.

**CHAMPAK.**—A tree with fragrant blossoms, *Michelia champaca*.

**CHAPATI.**—A cake of unleavened bread. (*Chappatti*.)

**CHAPRASI.**—An ordery or messenger, Northern India; syn. *pattawala*, Bombay; *peon*, Madras.

**CHARAS.**—The resin of the hemp plant, *Cannabis sativa*, used for smoking.

**CHARPI (charpoy).**—A bedstead with four legs, and tape stretched across the frame for a mattress.

**CHAUDHRI.**—Under native rule, a subordinate revenue official; at present the term is applied to the headman or representative of a trade guild.

**CHAUKIDAR.**—The village watchman and rural policeman.

**CHAUTH.**—The fourth part of the land revenue, exacted by the Marathas in subject territories.

**CHRELA.**—A pupil, usually in connexion with religious teaching.

**CHHAONI.**—A collection of thatched huts or barracks; hence a cantonment.

**CHHATRI.**—(1) An umbrella, (2) domed building such as a cenotaph.

*Note.*—According to the Hunterian system of transliteration here adopted the vowels have the following values:—a either long as the a in 'father,' or short as the u in 'cut,' e as the e in 'gain,' i either short as the i in 'bib,' or long as the ee in 'feel,' o as the o in 'bone,' u either short as the oo in 'good,' or long as the oo in 'boot,' ai as the i in 'mile,' au as the ou in 'grouse.' This is only a rough guide. The vowel values vary in different parts of India in a marked degree. The consonantal values are too intricate for discussion here.

**CHIEF COMMISSIONER.**—The administrative head of one of the lesser Provinces in British India.

**CHIKOR.**—A kind of partridge, *CACCABIS CHUCAR*.

**CHIKU.**—The Bombay name for the fruit of *ACHRAS SAPOTA*, the Sapodilla plum of the West Indies.

**CHINAR.**—A plane tree, *PLATANUS ORIENTALIS*.

**CHINKARA.**—The Indian gazelle, *GAZELLA BENNETTI*, often called 'ravine deer.'

**CHITAL.**—The spotted deer, *CERVUS AXIS*.

**CHOLAM.**—Name in Southern India for the large millet, *ANDROPOGON SORGHUM*; syn. *Jowar*.

**CHOLI.**—A kind of short bodice worn by women.

**CHUNAM, chuna.**—Lime plaster.

**CIRCLE.**—The area in charge of—(1) A Conservator of forests; (2) A Postmaster or Deputy Postmaster-General; (3) A Superintending Engineer of the Public Works Department.

**CIVIL SURGEON.**—The officer in medical charge of a District.

**COGNIZABLE.**—An offence for which the culprit can be arrested by the police without a warrant.

**COLLECTOR.**—The administrative head of a District in Regulation Provinces corresponding to the Deputy Commissioner in non-regulation areas.

**COMMISSIONER.**—(1) The officer in charge of a Division or group of Districts; (2) the head of various departments, such as Stamps, Excise, etc.

**COMPOUND.**—The garden and open land attached to a house. An Anglo-Indian word perhaps derived from 'kumpan', a hedge.

**CONSERVATOR.**—The Supervising Officer in charge of a Circle in the Forest Department.

**COUNCIL BILLS.**—Bills or telegraphic transfers drawn on the Indian Government by the Secretary of State in Council.

**COUNT.**—Cotton yarns are described as 20's, 30's, etc., counts when not more than a like number of hanks of 840 yards go to the pound avoirdupois.

**COURT OF WARDS.**—An establishment for managing estates of minors and other disqualified persons.

**CRORE, karor.**—Ten millions.

**DAFADAR.**—A non-commissioned native officer in the army or police.

**DAH OR DAO.**—A cutting instrument with no point, used as a sword, and also as an axe, Assam and Burma.

**LAK (dawk).**—A stage on a stage coach route. Dawk bungalow is the travellers' bungalow maintained at such stages in days before railways came.

**DAKAITI, DACOITY.**—Robbery by five or more persons.

**DAL.**—A generic term applied to various pulses.

**DAM.**—An old copper coin, one-fortieth of a rupee.

**DARBAR.**—(1) A ceremonial assembly, especially one presided over by the Ruler of a State, hence (2) the Government of a Native State.

**DARGAH.**—A Mahomedan shrine or tomb of a saint.

**DARI, Dhurrie.**—A rug or carpet, usually of cotton, but sometimes of wool.

**DAROGHA.**—The title of officials in various departments; now especially applied to subordinate controlling Officers in the Police and Jail Departments.

**DARWAN.**—A door-keeper.

**DARWAZA.**—A gateway.

**DEBOTTAR.**—Land assigned for the upkeep of temples or maintenance of Hindu worship.

**DEODAR.**—A cedar, *CEDRUS LIBANI* or *C. DEODARA*.

**DEPUTY COMMISSIONER.**—The Administrative head of a District in non-regulation areas corresponding to the Collector in Regulation Provinces.

**DEPUTY MAGISTRATE AND COLLECTOR.**—A subordinate of the Collector, having executive and judicial (revenue and criminal) powers; equivalent to Extra Assistant Commissioner in non-regulation areas.

**DESAI.**—A revenue official under native (Maratha) rule.

**DESH.**—(1) Native country; (2) the plains as opposed to the hills, Northern India; (3) the plateau of the Deccan above the Ghats.

**DESHMUH.**—A petty official under native (Maratha) rule.

**DEVA.**—A deity.

**DEVASTHAN.**—Land assigned for the upkeep of a temple or other religious foundation.

**DHAK.**—A tree, *BUTEA FRONDOSA*, with brilliant orange-scarlet flowers used for dyeing, and also producing a gum; syn. *palas*, Bengal and Bombay; *Chhiul*, Central India.

**DHAMANI.**—A heavy shighram or tonga drawn by bullocks.

**DHARMSALA.**—A charitable institution provided as a resting-place for pilgrims or travellers, Northern India.

**DHATURA.**—A stupefying drug, *DATURA FASTUOSA*.

**DHENKLI.**—Name in Northern India for the lever used in raising water; syn. *picottah*.

**DHOBI.**—A washerman.

**DHOTI.**—The loincloth worn by men.

**DISTRICT.**—The most important administrative unit of area.

**DIVISION.**—(1) A group of districts for administrative and revenue purposes, under a Commissioner; (2) the area in charge of a Deputy Conservator of Forests, usually corresponding with a (revenue) District; (3) the area under a Superintendent of Post Offices; (4) a group of (revenue) districts under an Executive Engineer of the Public Works Department.

**DIWAN.**—The chief minister in a Native State.

**DIWANI.**—Civil, especially revenue, administration; now used generally in Northern India of civil justice and Courts.

**DOAB.**—The tract between two rivers, especially that between the Ganges and Jumna.

**DRY CROP.**—A crop grown without artificial irrigation.

**DRY RATE.**—The rate of revenue for unirrigated land.

**DUN.**—A valley, Northern India.

**EKKA.**—A small two-wheeled conveyance drawn by a pony, Northern India.

**EXTRA ASSISTANT COMMISSIONER.**—See Deputy Magistrate and Collector.

**FAKIR.**—Properly an Islamic mendicant or a mendicant who has no creed, but often loosely used of Hindu mendicants also.

**FAMINE INSURANCE GRANT.**—An annual provision from revenue to meet direct famine expenditure, or the cost of certain classes of public works, or to avoid debt.

**FARMAN.**—An imperial (Mughal) order or grant.

**FAUJDARI.**—Under native rule, the area under a Faujdar or subordinate governor; now used generally of Magistrates' Criminal Courts.

**FINANCIAL COMMISSIONER.**—The chief controlling revenue authority in the Punjab, Burma and the Central Provinces.

**GADDI, Gadi.**—The cushion or throne of (Hindu) royalty.

**GANJA.**—The unfertilised flowers of the cultivated female hemp plant, *CANNABIS SATIVA*, used for smoking.

**GAUR.**—Wild cattle, commonly called 'bison', *BOS GAURUS*.

**GAYAL.**—A species of wild cattle, *BOS FRONTALIS*, domesticated on the North-East Frontier; syn. mithan.

**GHAT, Ghaut.**—(1) A landing-place on a river; (2) the bathing steps on the bank of a tank; (3) a pass up a mountain; (4) in European usage, a mountain range. In the last sense especially applied to the Eastern and Western Ghats.

**GHATWAL.**—A tenure-holder who originally held his land on the condition of guarding the neighbouring hill passes (ghats), Bengal.

**GHI, Ghee.**—Clarified butter.

**GINGELLY.**—See TIL.

**GODOWN.**—A store room or warehouse. An Anglo-Indian word derived from the Malay 'gadang.'

**GOPURAM.**—A gateway, especially applied to the great temple gateways in Southern India.

**GOSAIN, Goswami.**—A (Hindu) devotee; lit. one who restrains his passions.

**GOSHA.**—Name in Southern India for 'caste' women; lit. 'one who sits in a corner'; syn. parda.

**GRAM.**—A kind of pea, *CICER ARIETINUM*. In Southern India the pulse *DOLICHOS BIFLORUS* is known as horse gram.

**GUARANTEED.**—(1) A class of Native States in Central India; (2) A class of railways.

**GUNJ.**—The red seed with a black 'eye' of *ABRUS PRECATORIUS*, a common wild creeper, used as the official weight for minute quantities of opium 12th TOLA.

**GUR, Goor.**—Crude sugar; syn. jaggery, southern India; tanyet, Burma.

**GURAL.**—A Himalayan goat antelope, *CEMUS GORAL*.

**GURU.**—(1) A Hindu religious preceptor; (2) a schoolmaster, Bengal.

**HAJ.**—Pilgrimage to Mecca.

**HAJJI.**—A Mahomedan who has performed the haj. He is entitled to dye his beard red.

**HAKIM.**—A native doctor practising the Mahomedan system of medicine.

**HALALKHOR.**—A sweeper or scavenger; lit. one to whom everything is lawful food.

**HALI.**—Current. Applied to coin of Native States, especially Hyderabad.

**HAMAL.**—(1) A porter or cooly, (2) a house servant.

**HFIJRA (HIJRAH).**—The era dating from the flight of Mahomed to Mecca, June 20th, 622 A.D.

**HILSA.**—A kind of fish, *CLUPEA ILISHA*.

**HTI.**—An iron pinnacle placed on a pagoda in Burma.

**HUKKA, HOOKAH.**—The Indian tobacco pipe.

**IDGAH.**—An enclosed place outside a town where Mahomedan services are held on festivals known as the Id., etc.

**INAM.**—Lit. 'reward'. Hence land held revenue free or at a reduced rate, often subject to service. See DEVASTHAT, SARAJAM, WATAN.

**INUNDATION CANAL.**—A channel taken off from a river at a comparatively high level, which conveys water only when the river is in flood.

**JACK FRUIT.**—Fruit of *ARTOCARPUS INTEGRIFOLIA*, *VI PHANAN*.

**JAGGERY, Jagri.**—Name in Southern India for crude sugar; syn. gur.

**JAGIR.**—An assignment of land, or of the revenue of land held by a Jagirdar.

**JEMADAR.**—A native officer in the army or police.

**JHIL.**—A natural lake or swamp, Northern India; syn. bil, Eastern Bengal and Assam.

**JIHAD.**—A religious war undertaken by Mussalmans.

**JIRGA.**—A council of tribal elders, North-West frontier.

**JOWAR.**—The large millet, a very common food-grain, *ANDROPOGON SORGHUM*, or *SORGHUM VULGARE*; syn. cholam and jola, in Southern India.

**JUDICIAL COMMISSIONER.**—An officer exercising the functions of a High Court in the Central Provinces, Oudh, and Sind.

**KACHERI, kachahri.**—An office or office building, especially that of a Government official.

**KADAR, karbi.**—The straw of jowari (q. v.)—a valuable fodder.

**KAJU, kashew.**—The nut of *ANACARDIUM OCCIDENTALE* largely grown in the Konkan

**KAKAR.**—The barking deer, *CERVULUS MUNTJAC*.

**KALAR, kallar.**—Barren land covered with salt or alkaline efflorescences, Northern India.

**KAMARBAND, Cumberbund.**—A waistcloth, or belt.

**KANAT.**—The wall of a large tent.

**KANGAR.**—A kind of portable warming-pan, carried by persons in Kashmir to keep themselves warm.

**KANKAR.**—Nodular limestone, used for metal-ling roads, as building stones or for preparation of lime.

**KANS.**—A coarse glass which spreads and prevents cultivation especially in Bundelkhand, *SACCHARUM SPONTANEUM*.

**KANUNGO.**—A revenue Inspector.

**KARAIT.**—A very venomous snake, *BUNGARUS CANDIDUS* or *CAERULEUS*.

**KARBHARI.**—A manager.

**KAREZ.**—Underground tunnels near the skirts of hills, by which water is gradually led to the surface for irrigation, especially in Baluchistan.

**KARKUN.**—A clerk or writer, Bombay.

**KARMA.**—The doctrine that existence is conditioned by the sum of the good and evil actions in past existences.

**KARNAM.**—See *PATWARI*.

**KAZI.**—Under native rule, a judge administering Mahomedan law. Under British rule, the kazi registers marriages between Mahomedans and performs other functions, but has no powers conferred by law.

**KHALASI.**—A native fireman, sailor, artilleryman, or tent-pitcher.

**KHALSA.**—Lit. 'pure.' (1) Applied especially to themselves by the Sikhs, the word *Khalisa* being equivalent to the Sikh community; (2) land directly under Government as opposed to land alienated to grantees, etc., Northern India.

**KHANDI, candy.**—A weight especially used for cotton bales in Bombay—equivalent to 20 mds.

**KHARAB.**—In Bombay of any portion ran assessed survey No. which being uncultivable is left unassessed.

**KHARIF.**—Any crops sown just before or during the main S. W. monsoon.

**KHAS.**—Special, in Government hands. *Khas tahasildar*, the manager of a Government estate.

**KHASADAR.**—Local levies of foot soldiers, Afghanistan.

**KHAS-KHAS, Kus-Kus.**—A grass with scented roots, used for making screens which are placed in doorways and kept wet to cool a house by evaporation, *ANDROPOGON SQUAR ROSUS*.

**KHEDDA, kheda.**—A stockade into which wild elephants are driven; also applied to the operations for catching.

**KHICHADI, kejjerec**—A dish of cooked rice and other ingredients, and by Anglo-Indians specially used of rice with fish.

**KHILAT.**—A robe of honour.

**KHUTBA.**—The weekly prayer for Mahomedans in general and for the reigning sovereign in particular.

**KILLA.**—A fort.

**KINOOB, kamkhwab.**—Silk textiles brocaded with gold or silver.

**KODALI.**—The implement like a hoe or mattock in common use for digging; *syn. mamuti*, Southern India.

**KONKAN.**—The narrow strip of low land between the Western ghats and the sea.

**KOS.**—A variable measure of distance, usually estimated at about two miles. The distance between the kos-minars or milestones on the Mughal Imperial roads averages a little over 2 miles, 4 furlongs, 150 yards.

**KOT.**—Battlements.

**KOTHI.**—A large house.

**KOTWAL.**—The head of the police in a town, under native rule. The term is still used in Hyderabad and other parts of India.

**KOTWALI.**—The chief police station in a head-quarters town.

**KULKARNI.**—See *PATWARI*.

**KUMBHAR.**—A potter.

**KURAN.**—A big grass land growing grass fit for cutting.

**KYARI.**—Land embanked to hold water for rice cultivation.

**KYATUNG.**—A Buddhist monastery, which always contains a school, Burma.

**LAKH, lac.**—A hundred thousand.

**LAMBARDAR.**—The representative of the co-sharers in a zamindari village, Northern India.

**LANGUR.**—A large monkey, *Semnopithecus entellus*.

**LASCAR, correct lashkar.**—(1) an army, (2) in English usage a native Sailor.

**LAT.**—A monumental pillar.

**LATERITE.**—A vesicular material formed of disintegrated rock, used for buildings and making roads; also probably valuable for the production of aluminium. Laterite produces a deep brichord soil.

**LINGAM.**—The phallic emblem, worshipped as the representative of Shiva.

**LITCHI.**—A fruit tree grown in North India (*LITCHI CHINENSIS*).

**LONGYI.**—A waistcloth, Burma.

**LOTA.**—A small brass water-pot.

**LUNGI, loongi.**—(1) A turban; (2) a cloth worn by women.

**MADRASA.**—A school especially one for the higher instruction of Mahomedans.

**MAHAJAN.**—The guild by Hindu or Jain merchants in a city. The head of the Mahaj anesi, the Nagarsheth (*q. v.*).

**MAHAL.**—(1) Formerly a considerable tract of country; (2) now a village or part of a village for which a separate agreement is taken for the payment of land revenue; (3) a department of revenue, *e.g.*, right to catch elephants, or to take stone; (4) in Bombay a small Taluka under a MAHALKARI.

**MAHANT.**—The head of a Hindu conventua establishment.

**MAHARAJA.**—A title borne by Hindus, ranking above Raja.

**MAHSEER, mahasir.**—A large carp, *BARRBUS TOR* (lit. 'the big-headed').

**MAHUA.**—A tree, *BASSIA LATIFOLIA*, producing flowers used (when dried) as food or for distilling liquor, and seeds which furnish oil.

**MAIDAN.**—An open space of level ground; the park at Calcutta.

**MAJOR WORKS.**—Irrigation works for which separate accounts are kept of capital, revenue, and interest.

**MAKTAB.**—An elementary Mahomedan school.

**MALGUZAR** (revenue payer).—(1) The term applied in the Central Provinces to a co-sharer in a village held in ordinary proprietary tenure; (2) a cultivator in the Chamba State.

**MALI.**—A gardener.

**MANLATDAR.**—The officer in charge of a taluka, Bombay, whose duties are both executive and magisterial; syn. tahasildar.

**MANDAP**, or **mandapam.**—A porch or pillared hall, especially of a temple.

**MANGOSTEEN.**—The fruit of *GARCINIA MANGOSTANA*.

**MARKHOR.**—A wild goat in North Western India, *CAPRA PALCONERI*.

**MASJID.**—A mosque. Jama Masjid, the principal mosque in a town, where worshippers collect on Fridays.

**MASNAD.**—Seat of state or throne, Mahomedan; syn. gaddi.

**MATH.**—A Hindu conventual establishment.

**MAULVI.**—A person learned in Muhammadan law.

**MAUND**, ver **Man.**—A weight varying in different localities. The Ry. maund is 80 lbs.

**MAYA.**—Sanskrit term for delusion.

**MEHFL** or **MAHAL**—A palace.

**MELA.**—A religious festival or fair.

**MIHRAB.**—The niche in the centre of the western wall of a mosque.

**MIMBAR.**—Steps in a mosque, used as a pulpit.

**MINAR.**—A pillar or tower.

**MINOR WORKS.**—Irrigation works for which regular accounts are not kept, except, in some cases, of capital.

**MISTRI**—(1) a foreman, (2) a cook.

**MONSOON**—Lit. 'season,' and specifically (1) The S. W. Monsoon, which is a Northward extension of the S. E. trades, which in the Northern Summer cross the equator and circulate into and around the low pressure area over North India, caused by the excessive heating of the land area, and (2) The N. E. monsoon, which is the current of cold winds blowing down during the Northern winter from the cold land areas of Central Asia, giving rain in India only in S. E. Madras and Ceylon through moisture acquired in crossing the Bay of Bengal, and passing across the equator into the low pressure areas of the Australasian Southern summit.

**MUFASSAL**, **mofussil.**—The outlying parts of a District, Province or Presidency, as distinguished from the head-quarters (Sadri).

**MUKADDAM**, **muccadam.**—A representative or headman.

**MUKHTAR** (corruptly mukhtiar).—(1) A legal practitioner who has not got a sanad, and therefore cannot appear in court as of right; (2) any person holding a power of attorney on behalf of another person.

**MUKHTIARKAR.**—The officer in charge of a taluka, Sind, whose duties are both executive and magisterial; syn. tahasildar.

**MUKTI**, 'release.'—The perfect rest attained by the last death and the final reabsorption of the individual soul into the world—soul, syn. NIRVANA, MOKSHA.

**MUNG**, **mug.**—A pulse, *PHASEOLUS RADICATUS*: syn. mag, Gujarat.

**MUNJ**—(1) A tall grass (*SACCHARUM MUNJA*) in North India, from which mats are woven, and the Brahman sacred thread worn; (2) the said thread.

**MUNSHI**—A teacher of Hindustani or any Perso-Arabian language.

**MUNSHI.**—Judge of the lowest Court with civil jurisdiction.

**MURUM**, **moorum.**—Gravel, used for metal-ling roads.

**NACHANI-NAGLI**—See RAGI

**NAGARKHANA**, **Nakkarkhana.**—A place where drums are beaten.

**NAGARSHETH**—The head of the trading guild of Hindu and Jain Merchants in a city.

**NAIB.**—Assistant or Deputy.

**NAIK.**—A leader, hence (1) a local chieftain, in Southern India; (2) a native officer of the lowest rank (corporal) in the Indian army.

**NAT.**—A demon or spirit, Burma.

**NABAB.**—A title borne by Musalmans, corresponding roughly to that of Raja among Hindus.

**NAZAR**, **nazarana.**—A due paid on succession or on certain ceremonial occasions.

**NET ASSETS.**—(1) In Northern India, the rent or share of the gross produce of land taken by the landlord; (2) in Madras and Lower Burma, the difference between the assumed value of the crop and the estimate of its cost of production.

**NEWAR.**—Broad cockney woven across bedsteads instead of iron slats.

**NGAPI.**—Pressed fish or salted fish paste, largely made and consumed in Burma.

**NILGAI.**—An antelope, *BOSELAPHUS TRAGOCAMELUS*.

**NIM**, **neem.**—A tree, *MELIA AZADIRACHTA*, the berries of which are used in dyeing.

**NIRVANA.**—See MUKTI.

**NIZAM.**—A title borne by the ruler of Hyderabad State.

**NIZAMAT.**—A sub-division of a Native State, corresponding to a British District, chiefly in the Punjab and Bhopal.

**NON-AGRICULTURAL ASSESSMENT.**—Enhanced assessment imposed when land already assessed as agricultural is diverted to use as a building site or for industrial concerns.

**NON-COGNISABLE.**—An offence for which the culprit cannot be arrested by the police without a warrant.

**NON-OCCUPANCY TENANTS.**—A class of tenants with few statutory rights, except in Oudh, beyond the terms in their leases or agreements.

**NON-REGULATION.**—A term formerly applied to certain Provinces to show that the regulations of full code of legislation was not in force in them.

**NULLAH, NALA.**—A ravine, watercourse, or drain.

**OCCUPANCY TENANTS.**—A class of tenants with special rights in Central Provinces, in United Provinces.

**PADAUK.**—A well known Burmese tree (*PTEROCARPUS* sp.) from the behaviour of which the arrival of the monsoon is prognosticated.

**PADDY.**—Unhusked rice.

**PAGA.**—A troop of horses among the Marathas.

**PAGI.**—A tracker thieves of strayed or stolen animals.

**PAIGAH.**—A tenure in Hyderabad State.

**PAIK.**—(1) A foot soldier; (2) in Assam formerly applied to every free male above sixteen years.

**PAIRÉE.**—The name of the second best variety of Bombay mango, distinguishable from the *APRUS* (q. v.) by its pointed tip, and by the colour being less yellow and more green and red.

**PALAS.**—See **DHAK**.

**PALEI.**—A palanquin or litter.

**PAN.**—The betel vine, **PIPE BETLE**.

**PARAB.**—A public place for the distribution of water, maintained by charity.

**PARABADI.**—A platform with a smaller platform like a dovecot on a centre pole or pillar built and endowed or maintained by charity, where grain is put every day for animals and birds.

**PANCHAMA.**—Low caste, Southern India.

**PANCHAYAT.**—(1) A committee for management of the affairs of a caste, village, or town; (2) arbitrators. Theoretically the panchayat has five (panch) members.

**PANDIT.**—A Hindu title, strictly speaking applied to a person versed in the Hindu scriptures, but commonly used by Brahmans. In Assam applied to a grade of Inspectors of primary schools.

**PANSUPARI.**—Distribution of PAN and SUPARI (q. v.) as a form of ceremonial hospitality.

**PARDA, purdah.**—(1) A veil or curtain; (2) the practice of keeping women secluded; syn. **gosha**.

**PARDESI.**—Foreign. Used in Bombay especially of Hindu servants, syces, &c., from North India.

**PARGANA.**—Fiscal area or petty sub division of a tahsil, Northern India.

**PASHM.**—The fine wool of the Tibetan goat.

**PASO.**—A waistcloth.

**PAT, put.**—A stretch of firm, hard clay.

**PATEL.**—A village headman, Central and Western India; syn. **reddi**, Southern India, **gaon-bura**, Assam; **padhan**, Northern and Eastern India; **Mukhi**, Gujarat.

**PATIDAR.**—A co-sharer in a village, Gujarat.

**PATTAWALLA.**—See **CHAPRASI**.

**PATWARI.**—A village accountant; syn. **karnam**, Madras; **kulkarni**, Bombay Deccan; **talati**, Gujarat; **shanhogh**, Mysore, **Kanara** and **Coorg**; **Mandal**, Assam; **Tapedar**, Sind.

**PEON.**—See **CHAPRASI**.

**PESHKASH.**—A tribute or offering to a superior.

**PHULAV**, (Pillow).—A dish of rice and other ingredients, and by Anglo-Indians specifically used of chicken with rice and spices.

**PHULKARI.**—An embroidered sheet; lit. flower-work.

**PICE, palsa.**—A copper or bronze coin worth one farthing; also used as a generic term for money.

**PICOOTAH.**—A lever for raising water in a bucket for irrigation, Southern India; syn. **dhenkul** or **dhenkuli**, or **dhikli**, Northern India.

**PIPAL.**—A sacred tree, **FICUS RELIGIOSA**.

**PIR.**—A Mahomedan religious teacher or saint.

**PLEADER.**—A class of legal practitioner.

**PONGYI.**—A Buddhist monk or priest, Burma.

**POSTIN, poshteen.**—A coat or rug of sheep-skin tanned with the wool on, Afghanistan.

**PRANT.**—An administrative sub-division in Maratha States, corresponding to a British District (Baroda) or Division (Gwalior); also in Kathiawar.

**PRESIDENCY.**—A former Division of British India.

**PROTECTED.**—Forests over which a considerable degree of supervision is exercised, but less than in the case of 'reserved' forests.

**PROVINCE.**—One of the large Divisions of British India.

**PUJA.**—Worship, Hindu.

**PUJARI.**—The priest attached to a temple.

**PUNDIT.**—See **Pandit**.

**PURANA.**—Lit. 'old' Sanskrit (1) applied to certain Hindu religious books, (2) to a geological 'group'; (3) also to 'punch-marked' coins.

**PUROHIT.**—A domestic chaplain or spiritual guide, Hindu.

**PWE.**—An entertainment, Burma.

**RABI.**—Any crop sown after the main South-West monsoon.

**RAGI** (**ELEusine** **OROCANA**).—A small millet used as a food-grain in Western and Southern India; syn. **marua**, Nagli Nachli.

**RAJA.**—A title borne by Hindus and occasionally by Musalmans, corresponding roughly to that of Nawab which is peculiar to Musalmans.

**RAMOSHI.**—A caste whose work is watch and ward in the village lands and hence used of any **chaukidar** (q. v.).

**RANA.**—A title borne by some Rajput chiefs, equivalent to that of **Raja**.

**RANI.**—The wife or widow of a **Raja**.

**RAO.**—A title borne by Hindus, either equivalent to, or ranking below, that of **Raja**.

**BEGAR.**—Name for a black soil in Central and Southern India, which is very retentive of moisture, and suitable for growing cotton.

**REGULATION.**—A term formerly applied to certain provinces to show that the Regulations or full code of legislation applied to them.

**REH.**—Saline or alkaline efflorescences on the surface of the soil, Northern India.

**RESERVED.**—Forests intended to be maintained permanently.

**RICKSHAW.**—A one or two seat vehicle on two wheels drawn by coolies, used in the hills.

**ROHU.**—A kind of fish, LABEO ROHITA.

**RYOTWARI.**—The system of tenure in which land revenue is imposed on the actual occupants of holdings.

**SADR, sudder.**—Chief (adjective). Hence the headquarters of a District; formerly applied to the Appellate Courts.

**SAFFLOWER.**—A thistle which yields a yellow dye from its petals and oil from its seeds (CARTHAMUS TINCTORIUS), var. Kardai, Kushanti.

**SAL.**—A useful timber tree in Northern India, SHOREA ROBUSTA.

**SAMBAR.**—A deer, CERVUS UNICOLOR; syn. jarau.

**SAN.**—Bombay hemp, CROTALARIA JUNCCEA.

**SANAD.**—(1), A charter or grant, giving its name to a class of States in Central India held under a sanad, (2) any kind of deed of grants.

**SANNYASI.**—A Hindu mendicant.

**SARI.**—A long piece of cloth worn by women as a shawl.

**SARANJAM.**—Land held revenue free or on a reduced quit-rent in consideration of political services rendered by the holder's ancestors.

**SARKAR.**—(1) The Government; (2) a tract of territory under Muhammadan rule, corresponding roughly to a Division under British administration.

**SARSURAH.**—An officer in charge of a Division in the Baroda State corresponding to Commissioner of British territories.

**SATI.**—Suicide by a widow, especially on the funeral pyre of her husband.

**SAWBWA.**—A title borne by chiefs in the Shan States, Burma.

**SEMAL** or cotton tree.—A large forest tree with crimson flowers and pods containing a quantity of floss, BOMBAY MALABARICUM.

**SEROW, sarau.**—A goat antelope, NEMORHAEDUS BUBALINUS.

**SETTLEMENT.**—(1) The preparation of a cadastral record, and the fixing of the Government revenue from land; (2) the local inquiry made before Forest Reserves are created; (3) the financial arrangement between the Government of India and Local Governments.

**SHANBHOG.**—See PATWARI.

**SHASTRAS.**—The religious law-books of the Hindus.

**SHEGADI, seggaree.**—A pan on 3 feet with live charcoal in it.

**SHER, ser, seer.**—A weight, or measure varying much in size in different parts of the country. The Railway ser is about 2 lbs.

**SHETH, shethia.**—A Hindu or Jain merchant.

**SHIGURAM.**—See TONGA.

**SHISHAM** or **sisso.**—A valuable timber tree, DALBERGIA SISSOO.

**SILLADAR.**—A native trooper who furnishes his own horse and equipment.

**SOLA.**—A water-plant with a valuable pith, AESCHYNOMENE ASPERA.

**SOWAR.**—A mounted soldier or constable.

**STUPA** or **tope.**—A Buddhist tumulus, usually of brick or stone, and more or less hemispherical, containing relics.

**SUBAH.**—(1) A province under Mahomedan rule; (2) the officer in charge of a large tract in Baroda, corresponding to the Collector of a British District; (3) a group of Districts or Division, Hyderabad.

**SUBAH DAR.**—(1) The governor of a province under Mahomedan rule; (2) a native infantry officer in the Indian Army; (3) an official in Hyderabad corresponding to the Commissioner in British territory.

**SUB-DIVISION.**—A portion of a District in charge of a junior officer of the Indian Civil Service or a Deputy Collector.

**SUPARI.**—The fruit of the betel palm, ARECA CATECHU.

**SUPERINTENDENT.**—(1) The chief police officer in a District; (2) the official in charge of a hill station; (3) the official, usually of the Indian Medical Service, in charge of a Central Jail.

**SURTI.**—Native of Surat, specially used of persons of the Dhed or Mahar caste who work as house servants of Europeans, and whose house speech is Gujarati.

**SYOE, sais.**—A groom.

**TABUT.**—See TAZIAH.

**TAHSIL.**—A revenue sub-division of a District; syn. taluka, Bombay; taluka, Madras and Mysore; township, Burma.

**TAHSILDAR.**—The officer in charge of a tahsil; syn. Mamlatdar, Bombay; township officer or myo-ok, Burma; Mukhtiar, Sind; Vahivatdar, Baroda. His duties are both executive and magisterial.

**TAKAVI.**—Loans made to agriculturists for seed, bullocks, or agricultural improvements; syn. tagal, Bombay.

**TALATI.**—See PATWARI.

**TALAV, or talao.**—A lake or tank.



**TALUK, taluka.**—The estate of a talukdar in Oudh. A revenue sub-division of a District, in Bombay, Madras and Mysore; syn. tahsil.

**TALUKDAR.**—A landholder with peculiar tenures in different parts of India. (1) An official in the Hyderabad State, corresponding to the Magistrate and Collector (First Talukdar) or Deputy Magistrates and Collectors (Second and Third Talukdars); (2) a landholder with a peculiar form of tenure in Gujarat.

**TAMTAM, tumtum.**—A North Indian name for a light trap or cart.

**TANK.**—In Southern, Western, and Central India, a lake formed by damming up a valley; in Northern India, an excavation holding water.

**TAPEDAR.**—See PATWARI.

**TARAI.**—A moist swampy tract; the term especially applied to the tract along the foot of the Himalayas.

**TARI, toddy.**—The sap of the date, palmyra, or cocoanut palm, used as a drink, either fresh or after fermentation. In Northern India the juice of the date is called Sindh.

**TASAR, tussore.**—Wild silkworms, *ANTHRAEA PAPHIA*; also applied to the cloth made from their silk.

**TAZIA.**—Lath and paper models of the tombs of Hasan and Husain, carried in procession at the Muharram festival; syn. tabut.

**TEAK.**—A valuable timber tree in Southern and Western India and Burma, *TECTONA GRANDIS*.

**TELEGRAPHIC TRANSFERS.**—See Council bills.

**THAGI, thuggee.**—Robbery after strangulation of the victim.

**THAKUR.**—(1) The modern equivalent of the caste name Kshatriya in some parts of Northern India; (2) a title of respect applied to Brahmans; (3) a petty chief; (4) a hill tribe in the Western Ghats.

**THAMIN.**—The brow-antlered deer, Burma, *CERVUS ELDI*.

**THANA.**—A police station, and hence the circle attached to it.

**TIKA.**—(1) Ceremonial anointing on the forehead; (2) vaccination.

**TIKAM.**—The English pickaxe (of which the word is a corruption.)

**TIL.**—An oilseed, *SESAMUM INDICUM*; also known as gingelly in Madras.

**TINDAL, tandel.**—A foreman, subordinate officer of a ship.

**TIPAL, Teapoy.**—A table with 3 legs, and hence used of any small European style table.

**TOLA.**—A weight equivalent to 180 grains (troy).

**TONGA.**—A one or two horsed vehicle with a covered top. syn. *SHUGHEAN*.

**TSINE.**—Wild cattle found in Burma and to the southward, *Bos SONDAICUS*; syn. *haing* and *banteng*.

**UNIT.**—A term in famine administration, denoting one person relieved for one day.

**URIAL.**—A wild sheep in North-Western India, *OVIS VIGNEI*.

**URID, UDID.**—A pulse, 'black grain,' (*PHASEOLUS MUNGO*).

**UMBAR.**—A wild pig—(*FICUS GLOMERATA*).

**USAR.**—Soil made barren by saline efflorescence, Northern India.

**VAHIVATDAR.**—Officer in charge of a revenue sub-division, with both executive and magisterial functions, Baroda; syn. *tahsildar*.

**VAID or baidya, Bengal.**—A native doctor practising the Hindu system of medicine.

**VAKIL.**—(1) A class of legal practitioner; (2) an agent generally.

**VIHARA.**—A Buddhist monastery.

**VILLAGE.**—Usually applied to a certain area demarcated by survey, corresponding roughly to the English parish.

**VILLAGE UNION.**—An area in which local affairs are administered by a small committee.

**WADA or WADI.**—(1) an enclosure with houses built round facing a centre yard; (2) private enclosed land near a village.

**WAKF.**—A Muhammadan religious or charitable endowment.

**WAO.**—A step well.

**WATAN.**—A word of many senses. In Bombay Presidency used mostly of the land or cash allowance enjoyed by the person who performs some service useful for Govt. or to the village community.

**WAZIR.**—The chief minister at a Mahomedan court.

**WET RATE.**—The rate of revenue for land assured of irrigation.

**YOGI.**—A Hindu ascetic who follows the yoga system, a cardinal part of which is that it confers complete control over the bodily functions enabling the practiser, for instance to breathe in through one nostril and out at the other.

**YUNANI.**—Lit. Greek; the system of medicine practised by Mahomedans.

**ZAMINDAR.**—A landholder.

**ZAMINDARI.**—(1) An estate; (2) the rights of a landholder, zamindar; (3) the system of tenure in which land revenue is imposed on an individual or community occupying the position of a landlord.

**ZANANA.**—The women's quarters in a house; hence private education of women.

**ZIARAT.**—A Mahomedan shrine, North-Western Frontier.

**ZILA.**—A District.

## The New Capital.

The transfer of the capital of India from Calcutta to Delhi was announced at the Delhi Durbar on December 12, 1911. The reasons for it were stated in despatches between the Government of India and the Secretary of State published at the time. It had long been recognised as necessary, in the interests of the whole of India, to de-provincialise the Government of India, but this ideal was unattainable as long as the Government of India was located in one Province, and in the capital of that Province—the seat of the Bengal Government—for several months in every year. It was also desirable to free the Bengal Government from the close proximity of the Government of India which had been to the constant disadvantage of that Province. To achieve these two objects the removal of the capital from Calcutta was essential: its disadvantages had been recognised as long ago as 1868, when Sir Henry Maine advocated the change. Various places had been discussed as possible capitals, but Delhi was by common consent the best of them all. Its central position and situation as a railway junction, added to its historical associations, told in its favour; and, as Lord Crewe said in his despatch on the subject, "to the races of India, for whom the legends and records of the past are charged with so intense a meaning, this resumption by the Paramount Power of the seat of venerable Empire should at once enforce the continuity and promise the permanency of British sovereign rule over the length and breadth of the country."

The foundation stones of the new capital were laid by the King Emperor on December 15, 1911, when His Majesty said:—"It is my desire that the planning and designing of the public buildings to be erected will be considered with the greatest deliberation and care so that the new creation may be in every way worthy of this ancient and beautiful city." Subsequently a **town-planning committee** was appointed—consisting of Captain G. S. C. Swinton, Chairman, and Mr. J. A. Brodie and E. L. Lutyens, members—to advise on the choice of a site for, and the lay-out of, the capital. Mr. V. Lanchester was subsequently consulted by Government on some aspects of the question. The terms of their original engagement (subsequently renewed) were stated by the Under Secretary of State to be:—"The members of the committee will receive their travelling and living expenses, and the following fees for a five months' engagement.—Captain Swinton, 500 guineas; Mr. Brodie, 1,750 guineas; Mr. Lutyens, 1,500 guineas. The Secretary of State has also undertaken to refund to the Corporation of Liverpool the amount of Mr. Brodie's salary for the period of the absence."

**Delhi and its environs**—In their first report, dated from Simla, 13th June 1912, the Committee explain that, in dealing with the choice of a site, they felt that the following considerations were paramount and must receive the closest and most continual attention:—(a) Health and sanitation, (b) water-supply and irrigation supply, (c) the provision of ample room for expansion, (d) an extent

of land suitable for the location of buildings of various characters and sizes and for the provision of spacious parks and recreation grounds—To be assumed at 10 square miles for the new city and 15 square miles for the Cantonment—(e) Cost of land and the cost of executing necessary works on different sites, (f) facility for external and internal communication, (g) Civil and Military requirements.

On the east of the Jumna they found no suitable site. To the north of Delhi, on the west of the Jumna, where the Durbar camps were pitched they found some general advantages. The area is, for example, upwind and upstream from the present city of Delhi. The ruins and remains of the Delhis of the past do not cumber the ground. While the external communications might need improvement, the tract is fairly well served by existing railways. Roads and canals and the internal communication could be made convenient without excessive expenditure, and a good deal of money has already been spent on the area. But its disadvantages were found to be overwhelming. The site is too small and much of the land is liable to flooding. Similarly, the western slope of the hills to the south of Delhi the Naraina plain was found unsuitable, mainly because it cannot be considered to be Delhi, is destitute of historical associations, and is shut out from all view of Delhi.

**Southern site chosen.**—The Committee finally selected a site on the eastern slopes of the hills to the south of Delhi, on the fringe of the tract occupied by the Delhis of the past. They describe it as follows:—"Standing a little to the Delhi side of the village of Malcha, just below the hills almost in the centre of the site, and looking towards the Jumna, Shah-jahan's Delhi on the left fills the space between the ridge and the river. Following down from the present city on the foreshore of the riverain Firoz Shah's Delhi, the site of Indra Prastha, Humayun's fort, Humayun's tomb and Nizamuddin's tomb take the eye in a continuous progress to the rocky eminence on which Ghiyasuddin Tughlak erected his fortress city. On the right the Lal Kot, the Kutb, the Kila Rai Prithora, Siri and Jahanpanah complete the circle of the monuments of ancient Delhis. The mid space in the fore ground is filled by Safdar Jan's Mausoleum and the tombs of the Lodi dynasty, while to the left, towards Delhi, Jey Singh's gnomons and equatorial dials raise their fantastic shapes." The land chosen is free from liability to flood, has a natural drainage, and is not manworn. It is not cumbered with monuments and tombs needing reverent treatment, and the site is near the present centre of the town of Delhi.

**Healthiness of Site.**—In February, 1918, a Committee consisting of Surg-General Sir C. P. Lukis, Mr. H. T. Keeling, A.M.C.S., and Major J. C. Robertson, I.M.S., was appointed to consider the comparative healthiness of the northern and southern sites. Their report, dated 4th March, 1918, states that "the Committee, after giving full consideration to the various points discussed in the above note, is bound to advise the Government of India that no doubt can exist as to the superior

healthiness of the southern site, the medical and sanitary advantages of which are overwhelming when compared with those of the northern site."

**Report on Northern Site.**—In the same month the Town-Planning Committee presented their second report, which dealt with the northern site. This had been elicited by the fact that in December, 1912, Sir Bradford Leslie, an engineer with a distinguished Indian career, had read a paper before the Indian section of the Royal Society of Arts in London, in which he set forth plans for building the new capital on the northern site and producing a fine water effect by a treatment of the river Jumna. This paper aroused considerable attention in England, and its publication synchronised with some letters and articles in the press in India expressing a preference for the northern site. The latter voiced a natural attraction to the north site which the Committee themselves experienced on their first visit to Delhi, and enunciated some predilections which the Committee had at one time felt and later abandoned. The Town Planning Committee, therefore, undertook to review once more, and in greater detail, the arguments for and against the northern site. They came to the conclusion that:—"The soil is poor on the northern site as compared with the southern. The southern site is already healthy and has healthy surroundings. The northern site even after expenditure on sanitary requirements will never be satisfactory. If the northern site is to be made healthy, this involves going outside the site itself and making the neighbourhood healthy also. The building land to the south is generally good. On the north to be used at all it has in places to be raised at considerable cost. There is no really suitable healthy site for a cantonment in proximity to a city on the northern site. The exigencies of fitting in the requirements to the limited area of the northern site endanger the success of a lay-out as a whole and tend to make for cramping and bad arrangement. The result of placing a city on the northern site appears to the Committee to be the creation of a bad example in place of a good one."

**Final Town-Planning Report.**—The final report of the Town-Planning Committee, with a plan of the lay-out, was dated 20th March, 1913. The central point of interest in the lay-out, which gives the motif of the whole in Government House, the Council Chamber and the large blocks of Secretariats. This Government centre has been given a position at Raisina hill near the centre of the new city. Advantage is taken of the height of this hill and it is linked with the high ground behind so as to appear a spur of the ridge itself. Behind the hill a raised platform or forum would be built. This will be flanked by the large blocks of Secretariat buildings and terminated at its western end by the mass of Government House and the Council Chamber, with its wide flight of steps, portico and dome. The forum will be approached by inclined ways with easy gradients on both its north and south sides. The main access to this from the east. The axis of the main avenue centres on the north-west gate of Indrapat nearly due east of Government House.

Looking from the eastern end of the forum where the broad avenue enters the Governmental centre and where the great stairways are set, the view is towards the east. "Right and left the roadways go and weld into one the empire of to-day with the empires of the past and unite Government with the business and lives of its people."

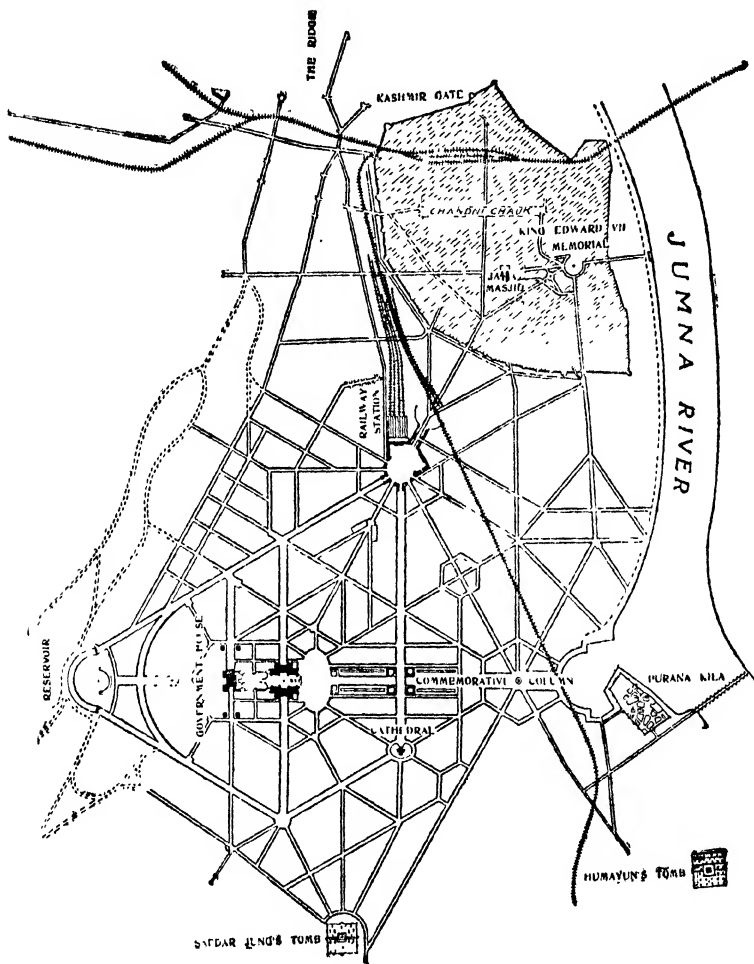
Behind Government House to the west will be its gardens and parks flanked by the general buildings belonging to the Viceregal estate. Beyond these again, on the ridge itself, will be a spacious amphitheatre to be made out of the quarry from which much of the stones for roads and buildings may be cut. Above this and behind it will lie the reservoir and its tower which will be treated so as to break the sky line of the ridge. To the east of the forum, and below it, will be a spacious forecourt defined by trees and linked on to the great main avenue or parkway which leads to Indrapat. Across this main axis, and at right angles to it, will run the avenue to the railway station. This will terminate in the railway station, the post office and business quarters at its northern end, and in the Cathedral at its southern extremity.

To the south-east will lie the park area in which stand the ancient monuments of Safdar Jang's Makhbara and the Lodi tombs. This area can be developed gradually as the city expands and has need of public institutions of various kinds. The axis running north-east from the Secretariat buildings to the railway station and towards the Jama Masjid will form the principal business approach to the present city. At the railway station a *place* will be laid out around which will be grouped the administrative and municipal offices, the banks, the shops and the hotels. On this *place* the post office is placed in symmetrical relation to the railway station.

The processional route will lead down from the railway station, due south to the point where it is intersected by the main east to west axis. Here round a *place* will be gathered the buildings of the Oriental Institute, the Museum, the Library and the Imperial Record Office. To the south-west of the railway station will lie the houses of the local administration and the residences of the European clerks.

Due south of the forum the residence of the Commander-in-Chief will be placed. Round about the Viceregal estate and the forum lies the ground destined for the residences of the Members of Council, the Secretaries and other officials of the Government of India. To the south-west of Government House lies the club. To the south of the club a low ridge divides the tract into two portions. That to the west is well adapted for a golf-course, while the eastern side is designed for a race-course, the ridge itself offering unusual facilities for locating stands and seeing the races.

**Communications.**—The avenues range from 300 feet to 600 feet with the exception of the main avenue east of the Secretariat buildings where a parkway width of 440 feet has been allowed. The principal avenues in addition to the main avenues are those running at right angles to the main east to west axis



Others form part of a system running from the amphitheatre to the railway station and Commander-in-Chief's residence, and from both the latter to the commemorative column, lying on the axis between Indrapat and Government House is the focal point of the roads and avenues on the parkway.

A lake which can be obtained by river treatment is shown on the plan. The lay-out has been made independent of the water effect, but the Committee think that its ultimate creation will enhance enormously the beauties and general amenities of the new capital; and it should and would become an integral portion of the design now submitted.

The report contains lengthy recommendations concerning water-supply, drainage, sewage system, parks and communications. It is imperative, it says:—"that a complete scheme of railway arrangements designed to serve the whole of the capital, both old and new, should be an essential feature of the lay-out of the Imperial City, and this important matter should not be left to be settled when it is too late to deal with it." The main lines of the lay-out as projected by the Committee have been accepted by Government. The expenses of the new central station and the difficulty experienced in meeting the various railway interests concerned will probably necessitate the postponement of this part of the scheme, and the needs of New Delhi will be met by a diversion of the existing Agra-Delhi Chord Railway to a line drawn eastward of Humayun's Tomb and Purana Killa and the construction of a new through station near the site of the proposed Central station. Another important modification consists in the reservation of the area lying south of the Delhi and Ajmere Gates of the city for the purpose of the extension of Old Delhi.

**Temporary Capital.**—For the use of the Government of India during the five years the building of the new capital is expected to occupy—a period that will have to be extended owing to the conditions created by the war—an area has been selected along the Alipur Road, between the present civil station of Delhi and the Ridge. The early idea that many of the officials should live under canvas had to be given up, and there are now temporary offices and residences. The architecture and method of construction are similar to those adopted in the exhibition buildings at Allahabad in 1910; but the buildings are expected to outlast the transitional period for which they are intended. They will subsequently be an asset of some value, the site they occupy becoming a suburb of the capital.

**Chief Commissioner Appointed.**—On October 1, 1912, by proclamation, there was constituted an administrative enclave of Delhi under a Chief Commissioner, Mr. W. M. Hailey, I.C.S. The Delhi district of the Punjab, from which this enclave was entirely taken, consisted of three tahsils or subdivisions and the enclave was formed by the central tahsil, that of Delhi, and by such part of the southern tahsil, Ballabgarh, as was comprised within the limits of the police post of Mahrauli. Delhi Province has an area of 528 square miles to which has recently been added an area of 45

square miles to the east of the Jumna river to serve as a grazing ground for the cattle for the city. The total area is, therefore, 573 square miles. On the basis of the Census of 1911, the population of the area originally included in the Province is 3,97,000 and of the new area 14,419, or a total of 4,11,400. The population of the Municipal town of Delhi is 2,25,000.

**The Architects' Designs.**—At the Royal Academy in 1914 there were exhibited drawings by Mr. Lutyens and Mr. Baker, which, though provisional and rather in the nature of what are called Warrant Designs, show how the architectural problems of the new capital are to be solved. Government House and the Secretariat have been planned by them as one block, as it were a Capital, facing towards Indrapat. The Secretariat is to be built on the rock of Raisina hill, the top of which has been levelled for the purpose: behind the Secretariat is to be a raised causeway forming the approach to Government House; and Government House itself is to be built on a high basement constructed on an outcrop of rock. The main processional route to Government House is to be along a sloping way (at a gradient of one in 22½) which leads from a semi-circular piazza, the "Great Court" to the level of the Secretariat buildings.

At the summit of this sloping way is the "Government Court", a space of about 1,100 feet in length, and 400 in breadth, flanked to the north and south by the two blocks of Secretariat buildings. These buildings have been designed by Mr. Baker and the aggregate cost will be some £750,000. According to the design the eastern end of each block is marked by deep loggias looking out over the central vista. In the centre of each block is a dome. In the case of the north block this marks an entrance hall: in the south block it surmounts a Conference hall with a suite of cloak and reception rooms. Each block contains three floors: in the lowest are motor garages, godowns, and record rooms: in the middle floor are the offices of Members, Secretaries and other officers: in the top floor are clerks' rooms. An essential feature of the design, and one which sets the character of the whole building, is the provision of loggias and recessed gateways or exedrae giving views through to the fountain courts situate in the interior of the blocks. The verandah so familiar in Indian buildings is altogether absent. The architect relies for control of temperature on thick external walls, with an air space inside, together with the thick window shutters adopted so widely in Southern Europe, and the wide *chajja* characteristic of Oriental buildings.

Between the north and south Secretariat blocks, is the way into the "Viceroy's Court"—the raised causeway already referred to—leading up to Government House. The Court is about 600 feet in breadth and 1,300 feet in length; it will be treated with grass and waterways and low trees: and should form a dignified approach to the final group of buildings. At a point midway in the causeway, roads lead off to the north and south, forming alternative lines of approach to Government House.

One thus reaches the portico of Government House. This portico is raised some twenty

feet above the causeway and fifty feet above the surrounding country. The house itself centres round the great Durbar Hall, a domed structure which dominates the scheme of the buildings surrounding it. Grouped round the Durbar Hall are the State rooms and great stairways from the entrance courts on the north and south sides. In the right wing is the Chamber of the Legislative Council of the Governor-General and offices for its Members. In April 1912, the Under Secretary of State indicated in Parliament the decision that this Chamber should be attached to the residence of the Governor-General. It has, therefore, been included in the design of Government House, but it has been assigned a separate approach through a spacious avenue of its own. The left wing contains the private suites. In the rear of the house will be a raised garden, walled and terraced after the manner of the Moghuls, and behind that again, on the level of the surrounding country, a park which will contain the staff houses and quarters. The park will lead up to the rocky slopes of the Ridge which closes in the vista on the west. The house, which has been designed by Mr. Lutyens, will, with its attached quarters, garden and park, and with the Legislative Council wing, cost approximately £500,000.

**Style of Architecture.**—There had been a prolonged "battle of the styles" over Delhi and if these designs gave satisfaction to neither of the extreme and opposed schools of thought, they clearly showed an endeavour to apply, with due regard for Indian sentiment, the spirit and essence of the great traditions of architecture to the solution of structural problems conditioned upon an Indian climate and Indian surroundings and requirements. To use the language of the architects themselves, it has been their aim "to express, within the limit of the medium and of the powers of its users, the ideal and the fact of British rule in India, of which the New Delhi must ever be the monument."

The inspiration of these designs is manifestly Western, as is that of British rule, but they combine with it distinctive Indian features without doing violence to the principles of structural fitness and artistic unity. Many of the details which will be still more characteristically Indian cannot be displayed at the present stage, for the elaborate ornament and decoration, in which the Indian craftsman excels, can scarcely be shown on large-scale drawings intended mainly to illustrate the general conception of the buildings. Much will depend, moreover, upon the resourcefulness and ability of the Indian artificers themselves whom the Government of India proposes to bring together in Delhi to give expression, by their decorative work, to the best traditions of skilled Indian craftsmanship.

**Cost of the Scheme.**—It was at first tentatively estimated that the cost of the new capital would be four million sterling and that sum was given in the original despatch of the Government of India on the subject. A revised estimate was given by H. E. the Viceroy in Council in March 1914. That estimate is as follows:—

(a) Salaries and Allowances, Rs. 70,18,700.

(b) Travelling Allowances of Officers and Establishments, Rs. 6,30,000.

(c) Supplies, Services and Contingencies, Rs. 8,78,600.

(d) Works Expenditure, (1) Buildings, Rs. 3,59,87,200, (2) Communications, Rs. 29,91,800, (3) Parks and Public Improvements, Rs. 27,34,500, (4) Electric Light and Power, Rs. 43,40,700, (5) Irrigation, Rs. 27,49,000, (6) Water Supply, Sewerage, Drainage, etc., Rs. 73,77,900, (7) Purchase of Tools and Plant, Rs. 85,50,600, (8) Survey Camps and General Preliminary Expenditure, Rs. 42,82,100, (9) Maintenance during Construction, Rs. 20,09,000.

(e) Acquisition of Land taken up, Rs. 36,48,200.

(f) Other Miscellaneous Expenditure, Rs. 6,000.

Deduct anticipated recovery from tools and plant, Rs. 10,00,000.

These figures when added up make an aggregate total of Rs. 7,67,04,300, or £ 5,113,620, but said His Excellency, "as we are anxious to face our liabilities for starting the new City to the fullest extent possible we consider it necessary to make a special provision for contingencies and unforeseen expenditure in excess of the usual provision that has been made of 5 per cent. on the works outlay, by adding a sum of one and a half crores or £1,000,000. We have accordingly a very large reserve to meet future possibilities, which we are not able to foresee at present. I should add that the expenditure of this additional crore and a half on unforeseen contingencies will be strictly controlled by the Government of India and no part of it spent unless absolutely necessary. On the other hand the project estimate contains certain items such as land, residences, water supply, electric power, irrigation, on which recoveries in the form of rent or taxes will in addition to meeting current expenditure partially at any rate cover the interest on capital outlay, while there are other items on which some return account of the sale of leases, general taxes, and indirect receipts may be expected."

**Progress of the work.**—The construction of New Delhi is making satisfactory progress having regard to the curtailment of the Budget allotment, in consequence of the war.

Much of the 1915-16 grant was expended on the many preliminaries required for transforming the rough site into a fine city by levelling making roads, digging foundations, collecting material, and manufacturing bricks. The Indian clerks' quarters and the menials' quarters have been completed, and bungalows have been provided for the occupation of the work staff. Experimental bungalows for the higher officials, to be built in the neighbourhood of Government House, are being put in hand, and are expected to be ready for occupation early in 1918.

Meanwhile the central point of interest in the plan has been given careful detailed consideration by the Government and the architects

The foundations of Government House and the large blocks of Secretariats by which it will be flanked have been laid and the basement walls are going up. An indication of the progress at the Governmental centre on Raisina Hill was seen in the Royal Academy, where the statues of their Majesties in Coronation robes, which are to be placed in front of Government House, have been exhibited. That of the King, by Mr. Mackenna, is the gift of the Maharaja Scindia of Gwalior, and that of the Queen, by Sir George Frampton, is the gift of the Maharaja of Bikanir. The keen interest of the ruling princes in the transfer of the capital, which is very welcome to them, is further shown in the gift by the Maharaja of Jaipur of the commemorative column in the central avenue. The column, surmounted by the Star of India, will be well seen from the "Great Place" leading to the central avenue.

**Two Cathedral Schemes.**—In October 1913 a letter was published in *The Times* from the Bishop of Calcutta on the provision of a Cathedral at Delhi. He appealed for £50,000 in addition to any grant given by the Government, and quoted in his letter the following statement of approval by the King-Emperor: "I heartily approve of the project to build a Cathedral in the new city of Delhi. I trust that the appeal for the necessary funds may meet with a generous response, so that in due time the capital of India may possess a Cathedral which in design and character will testify to the life and energy of the Anglican Church and be worthy of its architectural surroundings both of days gone by and of those to come." His Majesty subscribed £100 and the Queen £50 to the fund. The Indian Church Aid Association have received several contributions towards the building fund for the proposed Cathedral Church, in response to the appeal of the Bishop of Calcutta. Cheques may be sent to the Secretary, Indian Church Aid Association, Church House, West-

minster, S. W. and crossed Lloyds Bank, St. James's Street, S. W.

A Roman Catholic Cathedral is also projected and Father Paul Hughes, O.M.C., has been touring India collecting money for the Cathedral Fund.

**Suggested War Memorial.**—Suggestions have been made for completing the central avenue, sited upon Indrapat, by a stately colonnade entered by three large gateways, to commemorate the Indian heroes of the war. The separate bays would be utilized for distinct memorials regimental or communal, so that Hindu and Mahomedan, Sikh and Gurkha, Jat and Mahatta would have their respective niches.

**Sanitary Improvements.**—While the work on the new city has been going forward various improvements in the existing Delhi have been carried out and the sanitary conditions in particular have been much improved. The fly nuisance which was extremely bad in Delhi has been much reduced, and other schemes have been formulated as the result of a sanitary survey which embraced the whole of the city. In the past Delhi's death-rate has consistently exceeded the birth-rate, and but for immigration from the outlying districts the population would have gone down.

**Higher College for Chiefs.**—It was proposed during 1914 that a higher college for Chiefs should be established at Delhi and in this connexion a conference of Chiefs and Political Officers was held at Delhi, in March, at which the Viceroy presided. It was subsequently announced that subscriptions offered towards the college amounted to about ten and a half lakhs, various recurring sums were promised, and the Government of India also promised to recommend the Secretary of State a grant of Rs. 50,000 a year. Thus the whole capital would come to 12½ lakhs. The proposal is still under consideration.

# Indian Official Reports.

(MOSTLY ANNUAL.)

## General.—

Statistical Abstract relating to British India (Parliamentary Paper).

Statistics of British India :—

Vol. I.—Commercial.

Vol. II.—Financial.

Vol. III.—Public Health.

Vol. IV.—Administrative and Judicial.

Vol. V.—Educational.

Census Reports (Decennial), India, Provincial and Native States.

Administration Reports : Madras, Bombay, Coorg, United Provinces, Punjab, Bengal, Central Provinces and Berar, Burma, Bihar and Orissa, Assam, Andaman and Nicobar Islands, Civil and Military Station of Bangalore, Ajmer-Merwara, Baluchistan Agency, North-West Frontier Province, Delhi.

## Legislation.—

Acts of the Imperial and Provincial Legislative Councils.

## Justice and Police.—

Report on the Administration of Civil Justice for each Province.

Report on the Administration of Criminal Justice for each Province.

Report on Jails for each Province.

Reports on Police, for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

## Finance.—

Finance and Revenue Accounts of the Government of India.

East India Financial Statement (Parliamentary Paper).

Return of Net Income and Expenditure for eleven years (Parliamentary Paper).

Accounts and Estimates : Explanatory Memorandum (Parliamentary Paper).

Home Accounts (Parliamentary Paper).

Loans raised in England (Half-yearly Parliamentary Paper).

Loans raised in India (Half-yearly Parliamentary Paper).

Mint Reports for Calcutta and Bombay.

Paper Currency Department Reports, India and Bombay.

Statistics compiled from the Finance and Revenue Accounts.

## Land Revenue, &c.—

Land Revenue Administration Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.

Report on Land Revenue Administration, Land Records, Settlement Operations, Alienation of Land Act, &c., for North-West Frontier Province.

Madras Survey, Settlement and Land Records Department Report.

Reports of Land Records Departments for Bombay, Burma, Bengal, United Provinces, and Punjab.

Report on Settlement Operations, Punjab.

Reports on Survey and Settlement Operations, Bengal, Bihar and Orissa, and Assam.

Reports on Operations of the Land Records and Settlement Departments, Central Provinces and Berar.

Report of the Talukdari Settlement Officer, Bombay.

Provincial Reports on the Administration of Estates under the Court of Wards.

Report on the Punjab Canal Colonies.

## Separate Revenue (Salt, Excise, &c.)—

Salt Department Reports : Northern India, Madras, Bombay, Sind, Bengal, Burma, Bihar and Orissa.

Excise Report for each Province.

Report on the operations of the Opium Department.

Stamp Department Report for each Province.

Registration Department Report for each Province.

Income Tax Report for each Province.

## Agricultural and Veterinary.—

Report on the Progress of Agriculture in India.

Report on the Agricultural Research Institute and College, Pusa.

Bulletins of the Agricultural Research Institute, Pusa, and of the Provincial Departments of Agriculture.

Memoirs of the Department of Agriculture.

Proceedings of the Board of Agriculture.

Agricultural Journal of India (quarterly).

Reports of the Department of Agriculture in each Province.

Reports on Agricultural Stations, Experimental Farms, and Botanic Gardens for each Province.

Season and Crop Report for each Province.

Agricultural Statistics of India.

Area and Yield of certain Principal Crops.

Report on Production of Tea in India.

Report on Tea Culture in Assam.

Statistics compiled from the Reports of the Provincial Civil Veterinary Departments.

Report of the Camel Specialist.

Report of the Imperial Bacteriologist (Veterinary).

Reports of the Civil Veterinary Departments for Madras, Bombay, United Provinces, Punjab, Bengal, Burma, Assam, North-West Frontier Province, and Bihar and Orissa.



**Co-operative Societies.—**

- Statements showing Progress of the Co-operative Movement in India.
- Report on Co-operative Credit Societies for each Province.
- Reports of Conferences of Registrars of Co-operative Credit Societies, India and Provincial.

**Forests.—**

- Review of Forest Administration in British India.
- Report on Forest Administration for each Province.
- Reports of the Forest Research Institute and the Imperial Forest College, Dehra Dun.
- Quinquennial Forest Review
- Indian Forest Memoirs.
- Indian Forest Records.
- Forest Bulletins.

**Mineral Production and Mines.—**

- Review of Mineral Production (in Records of Geological Survey).
- Report on Production of Coal in India.
- Report of the Chief Inspector of Mines.

**Trade and Manufactures.—**

- Annual Statements of Sea-borne Trade and Navigation, India and Provincial (Madras, Bombay, Sind, Bengal, Bihar and Orissa Burma).
- Review of the Trade of India (Parliamentary Paper).
- Tables of the Trade of India (Parliamentary Paper).
- Provincial Reports on Maritime Trade and Customs (including working of Merchandise Marks Act) for Bengal, Bihar and Orissa, Bombay, Sind, Madras, and Burma.
- Accounts of Sea-borne Trade (monthly and for Calendar Year).
- Accounts of Land Trade (monthly).
- Annual Statement of Coasting Trade of British India.
- Report on the Trade and Navigation of Aden.
- Accounts of Trade carried by Rail and River in India.
- Report on Inland, Rail-borne, or Rail-and-River-borne Trade for each Province.
- External Land Trade Reports for Bengal, Bihar and Orissa, Assam, Burma, United Provinces, Punjab, North-West Frontier Province, Sind, and British Baluchistan.
- Indian Trade Journal (weekly).
- List of Joint-Stock Companies in British India and Mysore.
- Reports on the working of the Indian Companies Act (Provincial).
- Report on the working of the Indian Factories Act for each Province.
- Report of the Chief Inspector of Explosives.

**Public Works.—**

- Administration Report on Railways.
- Reports on Public Works (Buildings and Roads), for Madras, Bombay, Punjab, North-West Frontier Province, and Burma.
- Review of Irrigation.
- Report on Irrigation Revenue for each Province (except Madras).
- Administrative Reports on Irrigation, Madras and Bombay.

**Report on Architectural Work in India.****Post Office and Telegraphs.—**

- Reports on the Posts & Telegraphs of India.
- Report of Indo-European Telegraph Department.

**Scientific Departments.—**

- Report of the Operations of the Survey of India.
- Records of the Survey of India.
- Records and Memoirs of the Geological Survey of India.
- Report of the Indian Meteorological Department.
- Indian Weather Review, Annual Summary.
- Rainfall of India.
- Memoirs of the Indian Meteorological Department.
- Report of the Meteorologist, Calcutta.
- Report of the Director-General of Observatories.
- Memoirs and Bulletins of the Kodaikanal Observatory.
- Report of the Board of Scientific Advice.
- Report of the Archaeological Survey of India, and Provincial Reports.
- Report and Records of the Botanical Survey.

**Education, Literature, and the Press.—**

- Education Reports for India and each Province.
- Quinquennial Review of Education (Parliamentary Paper).

**Local Self-Government.—**

- Reports on Municipalities for each Province and for Calcutta, Bombay City, Madras City, and Rangoon.
- Report on District and Local Boards or Local Funds for each Province.
- Reports of Port Trusts of Calcutta, Bombay, Madras, Rangoon, Karachi, and Aden.

**Medical, Sanitary, and Vital Statistics.—**

- Report of the Sanitary Commissioner with the Government of India.
- Report on Sanitary Measures in India (Parliamentary Paper).
- Report of the Sanitary Commissioner for each Province.
- Vaccination Report for each Province.
- Report on Civil Hospitals and Dispensaries for each Province.
- Report on Lunatic Asylums for each Province.
- Report of the Chemical Examiner and Bacteriologist for each Province.
- Scientific Memoirs by Officers of the Medical and Sanitary Departments.
- Reports of the All-India Sanitary Conferences.
- Reports of the Imperial Malaria Conferences.
- Indian Journal of Medical Research (Quarterly).

**Emigration and Immigration.—**

- Calcutta Port Emigration Report.
- Bengal Inland Emigration Report.
- Assam Immigration Report.

**Prices and Wages.—**

- Prices and Wages in India.
- Variations in Indian Price Levels.
- Reports of Provincial Wage Commissions.

## Customs Tariff.

The customs revenue is mainly derived from the general import duty, certain special import duties such as those on arms, liquors, sugar, petroleum and tobacco, and an export duty on rice. General import duties, which were abolished in 1882, were reimposed in 1894, since which date the general rate of duty on commodities imported into British India by sea has been 5 per cent. *ad valorem*. Cotton was exempted in 1894 when the general duties were received; in December 1894 a 5 per cent. duty *ad valorem* was imposed on imported cotton goods and yarns, while an excise duty of 5 per cent. was imposed on all yarns of counts above 20 spun at power mills in British India; in February 1896 cotton yarns and threads imported or manufactured in India were freed from duty, while a uniform 3½ per cent. *ad valorem* duty was imposed on all woven cotton goods imported or manufactured in India at power mills. The products of hand looms are exempted. The gross revenue from imports, salt excluded, in 1915-16, was Rs. 7,35,31,000. The estimated gross revenue from this source for 1916-17 is Rs. 8,69,20,000.

The Chief alterations in the tariff, which came into force on March 1, 1916, are as follows:—

Goods which before have been dutiable at the rate of 5 per cent. now pay 7½ per cent. *ad valorem*. Machinery, which (with the exception of cartridge-making machinery and machines worked by animal or manual labour) was formerly free, is subject to a duty of 2½ per cent. *ad valorem*, but machinery for cotton spinning and weaving mills remains duty free, as do cotton yarn and thread. Cotton manufactures remain dutiable as before at the rate of 3½ per cent. *ad valorem*. Railway material and ships are to pay 2½ per cent., and coal a specific duty of 8 annas per ton. Iron and steel in bars, plates, sheets, and other manufactured forms, formerly dutiable at 1 per cent. are now to pay 2½ per cent. The rates for silver and petroleum remain as before, but silver plate and silver thread are to pay 15 per cent. The sugar duty is raised from 5 to 10 per cent., and considerable increases have also been made in the rates leviable on alcoholic liquors and tobacco. In addition export duties have been placed on tea and jute.

### Schedule II—(Import Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>I.—Food, Drink and Tobacco.</b>				
<b>FISH.</b>				
			Rs. a.	
1	FISH, SALTED, wet or dry .. .. .	Indian maund of 82½ lbs. avoirdupois weight.	....	Such rate or rates of duty not exceeding twelve annas as the Governor-General in Council may, by notification in the <i>Gazette of India</i> , from time to time prescribe.
2	FISHMAWS, including singally and sozille, and sharkfins.	....	<i>Ad valorem</i>	7½ per cent.
3	FISH, excluding salted fish (see No. 1) .. ..	....	"	7½ " "
<b>FRUITS AND VEGETABLES.</b>				
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—			
	Almonds without shell .. .. .	cwt.	80 0	7½ per cent.
	" in the shell .. .. .	"	20 0	7½ " "
	" kagozi .. { Persian .. .. .	"	75 0	7½ " "
	" .. { European .. .. .	"	45 0	7½ " "
	Cashew or cajoo kernels .. .. .	"	25 0	7½ " "
	Coconuts, Straits .. .. .	thousand.	75 0	7½ " "
	" other .. .. .	"	60 0	7½ " "
	" kernel (khopra) .. .. .	cwt.	21 0	7½ " "

## Schedule II—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>I.—Food, Drink and Tobacco—contd.</b>				
<b>FRUITS AND VEGETABLES—contd.</b>			Rs. a.	Rs. a. p.
4	<b>FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—contd.</b>			
	Currents .. .. .	cwt.	28 0	7½ per cent,
	Dates, dry, in bags .. .. .	"	7 12	7½ " "
	" wet, in dry baskets and bundles ..	"	5 8	7½ " "
	" in pots, boxes, tins and crates ..	"	8 0	7½ " "
	Figs, Persian, dried .. .. .	"	12 0	7½ " "
	Garlic .. .. .	"	6 0	7½ " "
	Pistachio nuts .. .. .	"	45 0	7½ " "
	Prunes, Bussora (Ain-Bokhara) .. ..	"	Ad valorem	7½ " "
	Raisins, black .. .. .	"	"	7½ " "
	" kishmish, Persian Gulf .. .. .	"	"	7½ " "
	" Munukka .. .. .	cwt.	12 0	7½ " "
	" other sorts .. .. .	"	Ad valorem	7½ " "
	Walnuts, all descriptions .. .. .	"	"	7½ " "
	All other sorts of fruits and vegetables, fresh, dried, salted or preserved.	"	"	7½ " "
<b>GRAIN, PULSE AND FLOUR.</b>				
5	<b>GRAIN AND PULSE, all sorts, including broken grain and pulse, but excluding flour (see No. 6)</b>	....	Ad valorem	2½ per cent
6	<b>FLOUR .. .. .</b>	....	"	7½ " "
<b>LIQUORS</b>				
7	<b>ALT, Beer, and Porter .. .. .</b>	Imperial gallon or 6 quart bottles	....	0 4 6
8	<b>CIDER and other fermented liquors .. ..</b>	"	....	0 4 6
9	<b>LIQUEURS, Cordials, Mixtures and other preparations containing spirit—</b>			
	(a) Entered in such a manner as to indicate that the strength is not to be tested.	"	"	14 10 0
	(b) If tested .. .. .	Imperial gallon or 6 quart bottles of the strength of London proof.	....	11 4 0
10	<b>PERFUMED SPIRITS .. .. .</b>	Imperial gallon or 6 quart bottles.	....	18 12 0
11	<b>SPIRIT, which has been rendered effectually and permanently unfit for human consumption.</b>	....	Ad valorem	7½ per cent

Schedule II—(Import Tariff)—continued.

Names of Articles.	Per	Tariff Valuation.	Duty.
<b>I.—Food, Drink and Tobacco—contd.</b>			
<b>LIQUORS—contd.</b>			
All other sorts of SPIRIT .. .. .	Imperial gallon or 6 quart bottles of the strength of London proof.	Rs. a p. ....	Rs. a. p. 11 4 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
<b>WINES—</b>			
Champagne and all other sparkling wines not containing more than 42 per cent. of proof spirit.	,	....	4 6 0
All other sorts of wines not containing more than 42 per cent. of proof spirit.	,	....	1 12 2
Provided that all sparkling and still wines containing more than 42 per cent. of proof spirit shall be liable to duty at the rate applicable to "All other sorts of Spirit."			
<b>PROVISIONS AND OILMAN'S STORES.</b>			
VINEGAR, in casks .. .. .	....	Ad valorem	2½ per cent.
<b>PROVISIONS, OILMAN'S STORES, AND GROCERIES, all sorts, excluding vinegar in casks (see No.14)—</b>			
Bacon .. .. .	....	Ad valorem	7½ " "
Beef and Pork .. .. .	....	"	7½ " "
Bêche de mer .. .. .	....	"	7½ " "
Butter .. .. .	lb.	1 6	7½ " "
Cassava, Tapioca or Sago .. .. .	cwt.	11 0	7½ " "
Cheese .. .. .	....	Ad valorem	7½ " "
China preserves in syrup .. .. .	cwt. (nett)	25 0	7½ " "
" dry, candied .. .. .	lb.	0 5	7½ " "
Cicum .. .. .	cwt.	5 0	7½ " "
Ghi .. .. .	"	70 0	7½ " "
Margarine .. .. .	....	Ad valorem	7½ " "
<b>Vinegar not in casks—</b>			
Persians .. .. .	....	"	7½ " "
Indian .. .. .	....	"	7½ " "
All other sorts of provisions, oilman's stores, and groceries.	....	"	7½ " "

## Schedule II—(Import Tariff)—continued.

No.	Name of Articles.	Per	Tariff Valuation.	Duty.
<b>I.—Food, Drink and Tobacco—contd.</b>				
<b>SPICES</b>				
16	SPICES, all sorts—			
	Betelnuts, raw, whole, split, or sliced, from Goa	cwt.	Rs. a, 14 0	7½ per cent
	"    "    and Dutch East Indies, " Straits	"	9 0	7½ " "
	"    whole, from Ceylon .. .. .	"	11 8	7½ " "
	"    raw, split (sun-dried), from Ceylon ..	"	25 0	7½ " "
	"    all other sorts .. .. .	....	<i>Ad valorem</i>	7½ " "
	Chillies, dry.. .. .	cwt.	15 0	7½ " "
	Cloves .. .. .	"	36 0	7½ " "
	"    exhausted.. .. .	"	14 0	7½ " "
	"    stems and heads .. .. .	"	10 0	7½ " "
	"    in seeds, nalahang .. .. .	"	13 0	7½ " "
	Ginger, dry.. .. .	"	15 0	7½ " "
	Mace .. .. .	lb	1 6	7½ " "
	Nutmegs .. .. .	"	0 5	7½ " "
	"    in shell .. .. .	"	0 3	7½ " "
	Pepper, black .. .. .	cwt.	34 0	7½ " "
	"    white .. .. .	"	60 0	7½ " "
	All other sorts of spices .. .. .	....	<i>Ad valorem</i>	7½ " "
<b>SUGAR.</b>				
17	CONFECTIONERY .. .. .	....	<i>Ad valorem</i>	7½ per cen
18	SUGAR, all sorts, including Molasses and Saccharine produce of all sorts, but excluding confectionery (see No. 17)—			
	Sugar, crystallised, beet.. .. .	cwt.	15 12	10 " "
	"    "    and soft, refined in China ..	"	15 12	10 " "
	"    "    "    "    from Japan .. .. .	"	15 12	10 " "
	"    "    "    "    from Egypt .. .. .	"	15 12	10 " "
	All other sorts of Sugar—			
	Sugar, crystallised and soft, from Java, 23 Dutch standard and above.	cwt.	14 12	10 " "
	"    "    "    from Java, 16 to 22 Dutch standard.	"	13 4	10 " "
	"    "    "    from Java, 15 Dutch standard and under.	"	11 0	10 " "
	"    "    "    from Mauritius, equal to 10 Dutch standard and over.	"	15 4	10 " "
	Molasses from Java .. .. .	"	2 8	10 " "
	"    "    other countries .. .. .	"	2 8	10 " "
	Sugar, all other sorts, including saccharine produce of all kinds.	....	<i>Ad valorem</i>	10 " "
<b>TEA.</b>				
19	TEA—			
	Tea, black .. .. .	lb.	0 10	7½ per cent.
	"    green .. .. .	"	0 9	7½ " "

**Schedule II—(Import Tariff)—continued.**

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>I.—Food, Drink and Tobacco—contd.</b>				
<b>OTHER FOOD AND DRINK.</b>			Rs. a.	Rs. a. p.
20	COFFEE.. .. .	cwt.	45 0	7½ per cent.
21	HOPS .. .	....	....	Free.
22	SALT .. .	Indian maund of 82½ lbs avoirdupois weight.	....	The rate at which excise duty is for the time being leviable on salt manufactured in the place where the import takes place.
23	SALT imported into British India and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in any process of manufacture; also salt imported into the port of Calcutta and issued with the sanction of the Government of Bengal to manufacturers of glazed stoneware; also salt imported into any port in the provinces of Bengal and Bihar and Orissa and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in curing fish in those provinces.	....	..	Free.
24	ALL OTHER SORTS OF FOOD AND DRINK not otherwise specified.	....	Ad valorem	7½ per cent.
<b>TOBACCO.</b>				
25	TOBACCO, unmanufactured .. .	lb.	....	1 0 0
26	CIGARS AND CIGARETTES .. .	....	Ad valorem	50 per cent.
27	All other sorts of TOBACCO, manufactured.. .	lb.	....	1 8 0
<b>II.—Raw Materials and produce and articles mainly unmanufactured.</b>				
<b>COAL, ETC.</b>				
28	COAL, COKE AND PATENT FUEL .. .	Ton.	....	0 8 0
<b>GUMS, RESINS AND LAC.</b>				
29	GUMS, RESINS AND LAC, all sorts—		Ad valorem	7½ per cent
	Copal .. .	....	20 0	7½ "
	Cutch and gambier (natural) .. .	cwt.	1 12	7½ "
	Gamboge .. .	lb.		7½ "
	Gum Ammoniac .. .	cwt.	30 0	7½ "
	" Arabic .. .	"	16 0	7½ "
	" Bdellium .. .	....	Ad valorem	7½ "
	" Benjamin, ras .. .	cwt.	34 0	7½ "

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff valuation.	Duty.
<b>II.—Raw Materials and produce and articles mainly unmanufactured</b> —contd.			Rs. a.	Rs. a. p.
29	<b>GUMS, RESINS AND LAC, all sorts—contd.</b>			
	Gum Benjamin, cowrie .. .. .	cwt.	80 0	7½ per cent
	„ Bysabol (coarse myrrh) .. .. .	„	24 0	7½ „ „
	„ Olibanum of frankincense .. .. .	....	<i>Ad valorem</i>	7½ „ „
	„ Persian (false) .. .. .	cwt	10 0	7½ „ „
	Myrrh .. .. .	„	30 0	7½ „ „
	Resin .. .. .	„	11 0	7½ „ „
	All other sorts of gums, gum-resins, and articles made of gum or gum-resin.	....	<i>Ad valorem</i>	7½ „ „
<b>HIDES AND SKINS, RAW.</b>				
30	<b>HIDES AND SKINS, raw or salted.. .. .</b>	....	....	Free.
<b>METALLIC ORES, AND SCRAP IRON OR STEEL FOR RE-MANUFACTURE.</b>				
31	<b>IRON OR STEEL, old.. .. .</b>	cwt.	2 8	2½ per cent
32	<b>METALLIC ORES, all sorts .. .. .</b>	....	<i>Ad valorem</i>	7½ „ „
<b>OILS.</b>				
33	<b>PETROLEUM, including also naphtha and the liquids commonly known by the names of rock-oil, Rangoon-oil, Burma oil, kerosine, paraffin oil, mineral oil, petrolene, gasoline, benzol, benzoline, benzine, and any inflammable liquid which is made from petroleum, coal, schist, shale, peat or any other bituminous substance, or from any products of petroleum, but excluding the following classes or petroleum.</b>	Imperial gallon.	....	0 1 6
	Petroleum which has its flashing point at or above two hundred degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively for the batching of jute or other fibre, or for lubricating purposes.	....	<i>Ad valorem</i>	7½ per cent
	Petroleum which has its flashing point at or above one hundred and fifty degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively as fuel or for some sanitary or hygienic purpose.	....	<i>Ad valorem</i>	7½ „ „
34	<b>All other sorts of animal, essential, mineral, and vegetable non-essential OILS—</b>			
	Cocoonut oil .. .. .	cwt.	8 0	7½ „ „
	All other sorts of oil .. .. .	....	<i>Ad valorem.</i>	7½ „ „

Schedule II.—(Import Tariff)—continued

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>II.—Raw materials and produce and articles mainly unmanufactured—contd.</b>				
<b>SEEDS.</b>				
			Rs. a.	
35	OIL-SEEDS, imported into British India by sea from the territories of any Native Prince or Chief in India.	....	....	Free.
36	SEEDS, all sorts, excluding oil-seeds specified in No. 35.	....	<i>Ad valorem</i>	7½ per cent
<b>TALLOW, STEARINE AND WAX.</b>				
37	TALLOW AND STEARINE, including grease and animal fat, and WAX of all sorts, not otherwise specified	....	<i>Ad valorem</i>	7½ per cent
<b>TEXTILE MATERIALS.</b>				
38	COTTON, raw .. .. .	....	....	Free
39	WOOL, raw .. .. .	....	..	"
40	TEXTILE MATERIALS, the following:—			
	Silk waste and raw silk including cocoons—			
	Bokhara .. .. .	lb.	6 0	7½ per cent
	Floss .. .. .	..	<i>Ad valorem</i>	7½ " "
	Raw silk—Yellow Shanghai, including reeled, Yellow from Indo-China, and places in China other than Shanghai including re-reeled.	lb.	5 0	7½ " "
		"	5 2	7½ " "
	Mathow .. .. .	"	3 8	7½ " "
	Panjam .. .. .	"	2 8	7½ " "
	Persian .. .. .	"	4 8	7½ " "
	Siam .. .. .	"	3 6	7½ " "
	White Shanghai, Thonkoon Duplion.	"	3 8	7½ " "
	" " other kinds including re-reeled.	"	8 10	7½ " "
	" " other kinds of China, including re-reeled.	"	6 10	7½ " "
	Waste and Kachra .. .. .	....	<i>Ad valorem</i>	7½ " "
	All other sorts, including cocoons .. .. .	....	"	7½ " "
	Raw Flax, Hemp, Jute and all other unmanufactured textile materials not otherwise specified.	....	"	7½ " "
<b>WOOD AND TIMBER.</b>				
41	FIREWOOD .. .. .	....	<i>Ad valorem</i>	2½ per cent.
42	WOOD AND TIMBER, all sorts, not otherwise specified, including all sorts of ornamental wood.	....	"	7½ " "



## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>II.—Raw materials and produce and articles mainly unmanufactured—contd.</b>				
MISCELLANEOUS.			Rs. a.	
43	CANES AND RATTANS .. .. .	....	<i>Ad valorem</i>	7½ per cent
44	COWRIES AND SHELLS, including Tortoise-shell—			
	Chanks—large shells, for cameos .. .. .	....	..	7½ " "
	" white, live .. .. .	....	..	7½ " "
	" dead .. .. .	....	..	7½ " "
	Cowras .. .. .	....	..	7½ " "
	Cowries, bazar, common .. .. .	cwt.	4 0	7½ " "
	" yellow, superior quality .. .. .	"	5 0	7½ " "
	" Maldiva .. .. .	"	7 0	7½ " "
	" Sankhili .. .. .	"	125 0	7½ " "
	Mother-of-pearl, naere .. .. .	....	<i>Ad valorem</i>	7½ " "
	Nakhla .. .. .	cwt.	105 0	7½ " "
	Tortoise-shell .. .. .	lb.	13 0	7½ " "
	" nakh .. .. .	"	5 0	7½ " "
	All other sorts, including articles made of shell, not otherwise described.	....	<i>Ad valorem</i>	7½ " "
45	IVORY, unmanufactured—			
	Elephant's grinders .. .. .	cwt.	300 0	7½ " "
	" tusks (other than hollows, centres, and points), each exceeding 20 lb. in weight, and hollows, centres, and points each weighing 10 lb. and over.	"	850 0	7½ " "
	Elephants' tusks (other than hollows, centres and points), not less than 10 lb and not exceeding 20 lb each, and hollows, centres, and points each weighing less than 10 lb.	"	750 0	7½ " "
	Elephants' tusks, each less than 10 lb (other than hollows, centres and points).	"	450 0	7½ " "
	Sea-cow or moye teeth, each not less than 4 lb.	cwt.	200 0	7½ " "
	Sea-cow or moye teeth, each not less than 3 lb and under 4 lb	"	175 0	7½ " "
	Sea-cow or moye teeth, each less than 3 lb. ..	"	115 0	7½ " "
	All other sorts unmanufactured not otherwise	"	<i>Ad valorem</i>	7½ " "
46	MANURES, all sorts, including animal bones and the following chemical manures:— Basic slag, nitrate of soda, muriate of potash, sulphate of potash, kainit salts, nitrate of lime, calcium cyanamide and mineral superphosphates.	....	....	Free.
47	PRECIOUS STONES AND PEARLS, unset * .. ..	..	<i>Ad valorem</i>	7½ per cent
48	PULP OF WOOD, RAGS and other paper-making materials.	....	....	Free.
49	ALL OTHER RAW MATERIALS, and produce and articles mainly unmanufactured, not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent

\* Pearls unset have been exempted by executive order from payment of duty.

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured.</b>				
<b>APPAREL.</b>				
50	APPAREL, including drapery, boots and shoes, and military and other uniforms and accoutrements, but excluding uniforms and accoutrements exempted from duty (No. 51) and silver thread (No. 90).	....	<i>Ad valorem</i>	7½ per cent.
51	UNIFORMS AND ACCOUTREMENTS appertaining thereto, imported by a public servant for his personal use.	....	....	Free.
<b>ARMS, AMMUNITION AND MILITARY STORES.</b>				
52	Subject to the exemptions specified in No. 55, ARMS, AMMUNITION AND MILITARY STORES that is to say,—			
	(1) Firearms other than pistols, including gas and air guns and rifles.	Each.	....	Rs. a. 50 0
	(2) Barrels for the same, whether single or double.	"	....	30 0
	(3) Pistols .. .. .	"	..	15 0
	(4) Barrels for the same, whether single or double.	"	..	10 0
	(5) Main springs and magazine springs for firearms, including gas, guns and rifles	"	....	8 0
	(6) Gun stocks and breech blocks .. ..	"	....	5 0
	(7) Revolver cylinders, for each cartridge they will carry	"	....	2 8
	(8) Actions (including skeleton and waster), breech bolts and their heads, cocking pieces, and locks (for muzzle-loading arms)	"	....	1 8
	(9) Machines for making loading or closing cartridges for rifled arms.	"	..	10 0
	(10) Machines for capping cartridges for rifled arms.	"	....	2 8
				} or 20 per cent. <i>ad valorem</i> whichever is higher.
<i>Proviso 1.</i> —No duty in excess of 20 per cent <i>ad valorem</i> shall be levied upon any of the articles specified in items Nos. 1 to 10 of this entry when they are imported in reasonable quantity, for his own private use, by any person lawfully entitled to possess the same.				
<i>Proviso 2.</i> —When any articles which have been otherwise imported and upon which duty has been levied or is leviable under items Nos. 1 to 10, are purchased retail from the importer by a person lawfully entitled as aforesaid, in reasonable quantity for his own private use, the importer may apply to the Collector of Customs for refund or remission (as the case may be) of so much of the duty thereon as is in excess of 20 per cent. <i>ad valorem</i> ; and if such Collector is satisfied as to the identity of the articles and that such importer is in other respects entitled to such refund or remission, he shall grant the same accordingly.				

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles	Per	Tariff Valuation.	Duty.
<p><b>III.—Articles wholly or mainly manufactured—contd.</b></p> <p><b>ARMS, AMMUNITION AND MILITARY STORES—contd.</b></p>				
53	GUNPOWDER for cannons, rifles, guns, pistols and sporting purposes.	.	<i>Ad valorem</i>	20 per cent.
54	Subject to the exemptions specified in No. 55 all ARTICLES, other than those specified in entry No. 52, which are ARMS OR PARTS OF ARMS within the meaning of the Indian Arms Act, (excluding springs used for air-guns which are dutiable as hardware, under No. 68), all tools used for cleaning or putting together the same all machines for making, loading, closing or capping cartridges for arms other than rifled arms and all other sorts of ammunition and military stores, and any articles which the Governor General in Council may by notification in the <i>Gazette of India</i> declare to be "ammunition" or "military stores" for the purposes of this Act		"	20 " "
55	<p>The following classes of ARMS, AMMUNITION AND MILITARY STORES. —</p> <p>(a) Articles falling under the 5th, 6th, 8th, 9th or 10th item of No. 52 when they appertain to a firearm falling under the 1st or 3rd item and are fitted into the same case with such firearm,</p> <p>(b) Arms forming part of the regular equipment of an officer entitled to wear diplomatic, military, naval or police uniform,</p> <p>(c) A sword, a revolver, or a pair of pistols when accompanying an officer of his Majesty's regular forces, or a commissioned officer of a volunteer corps or certified by the commandant of the corps to which such officer belongs, or, in the case of an officer not attached to any corps, by the officer commanding the station or district in which such officer is serving, to be imported by the officer for the purpose of his equipment,</p> <p>(d) Swords and revolvers which are certified by an Inspector-General of Police to be part of the ordinary equipment of members of the Police force under his charge;</p> <p>(e) Swords forming part of the equipment of Indian commissioned officers of His Majesty's army;</p>	.		Free

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b>			Rs. a.	Rs. a. p.
<b>ARMS, AMMUNITION AND MILITARY STORES—contd.</b>				
55	<b>ARMS, AMMUNITION AND MILITARY STORES—contd.</b> (f) Swords for presentation as army or volunteer prizes; (g) Arms, ammunition and military stores imported with the sanction of the Government of India for the use of any portion of the military forces of a Native State in India which may be maintained and organized for Imperial Service; (h) Morris tubes and patent ammunition imported by officers commanding British and Indian regiments or volunteer corps for the instruction of their men.			
56	EXPLOSIVES, namely, blasting gunpowder, blasting gelatine, blasting dynamite, blasting roburite, blasting tonite, and all other sorts, including detonators and blasting fuse.	....	Ad valorem	7½ per cent.
<b>CARRIAGES AND CARTS.</b>				
57	CARRIAGES AND CARTS including motor-cars, motor-cycles and motor-wagons, bicycles, tri-cycles, jinrikshas, bath chairs, perambulators, trucks, wheel-barrow, and all other sorts of conveyances and component parts thereof.	.. .	Ad valorem	7½ „ „
<b>CHEMICALS, DRUGS AND MEDICINES.</b>				
58	ANTI-PLAGUE SERUM .. .. .	...	...	Free.
59	COPPERAS, green .. .. .	....	Ad valorem	2½ per cent.
60	OPIMUM and its alkaloids .. .. .	Scer of 8 tolas.	....	21 0 0
61	QUININE and other alkaloids of cinchona ..	....	....	Free.
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—			
	Acid, sulphuric .. .. .	....	Ad valorem	7½ per cent.
	Alkali, Indian (saji-khar) .. .. .	cwt.	3 0	7½ „ „
	Alum .. .. .	..	6 8	7½ „ „
	Arsenic (China mansil) .. .. .	..	17 0	7½ „ „
	„ other sorts .. .. .	....	Ad valorem	7½ „ „
	Sal ammoniac .. .. .	cwt.	36 0	7½ „ „
	Soda ash .. .. .	..	4 0	7½ „ „
	Soda Bicarbonate .. .. .	..	5 8	7½ „ „
	Sulphate of Copper .. .. .	..	20 0	7½ „ „
	Sulphur (brimstone), flour .. .. .	..	7 0	7½ „ „
	„ „ roll .. .. .	..	6 0	7½ „ „
	„ „ rough .. .. .	....	Ad valorem	7½ „ „

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b> <b>CHEMICALS, DRUGS AND MEDICINES</b> —contd.				
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—contd. All other sorts of chemical products and preparations not otherwise specified .. .. .		Rs. a.	
	Aloes, black .. .. .		Ad valorem.	7½ per cent.
	„ Socotra .. .. .		„	7½ „ „
	Aloe-wood .. .. .		„	7½ „ „
	Asafoetida (hing) .. .. . cwt.	120	0	7½ „ „
	„ coarse (hingra) .. .. .	„	30 0	7½ „ „
	Atary, Persian .. .. .		Ad valorem	7½ „ „
	Banslochan (bamboo camphor) .. .. . lb.	0	6	7½ „ „
	Brimstone (amalsara) .. .. .		Ad valorem	7½ „ „
	Calumba root .. .. . cwt.	7	0	7½ „ „
	Camphor, refined, other than powder .. lb.	1	4	7½ „ „
	„ in powder .. .. .		Ad valorem	7½ „ „
	Cassia lignea .. .. . cwt.	17	0	7½ „ „
	China root (chobchini), rough .. .. .	10	0	7½ „ „
	„ „ „ scraped .. .. .	„	19 0	7½ „ „
	Cocaine .. .. .		Ad valorem	7½ „ „
	Cubeb .. .. . cwt.	85	0	7½ „ „
	Galangul, China .. .. .	„	10 8	7½ „ „
	Pellitory (akalkara) .. .. .		Ad valorem	7½ „ „
	Peppermint, crystals .. .. .		„	7½ „ „
	Salap .. .. . cwt.	40	0	7½ „ „
	Senna leaves .. .. .		Ad valorem	7½ „ „
	Storax, liquid (rose mellos or salaras) .. cwt.	40	0	7½ „ „
	All other sorts of drugs, medicines, and narcotics.		Ad valorem	7½ „ „
<b>CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS.</b>				
63	The following AGRICULTURAL IMPLEMENTS, when constructed so that they can be worked by manual or animal power, namely, winnowers, threshers, mowing and reaping machines, elevators, seed-crushers, chaff-cutters, root-cutters, horse and bullock gears, ploughs, cultivators' scarifiers, harrows, clod-crushers, seed-drill, hay tedders, and rakes.	....	....	Free.
64	CLOCKS AND WATCHES, and parts thereof. . .	....	Ad valorem	7½ per cent.
65	CUTLERY .. .. .	....	„	7½ „ „
66	The following DAIRYAPPLIANCES, when constructed, so that they can be worked by manual or animal power, namely, cream separators, milk sterilizing or pasteurizing plant, milk aerating and cooling apparatus, churns, butter dryers, and butter workers.	....	....	Free.
67	ELECTROPLATED WARE .. .. .	....	Ad valorem	7½ per cent.
68	HARDWARE, IRONMONGERY AND TOOLS, all sorts not otherwise specified.	....	„	7½ „ „

Schedule IV.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b>			Rs. a.	
<b>CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS—contd.</b>				
69	INSTRUMENTS, APPARATUS, AND APPLIANCES, imported by a passenger as part of his personal baggage and in actual use by him in the exercise of his profession or calling.	....	....	Free.
70	TELEGRAPHIC INSTRUMENTS AND APPARATUS, and parts thereof, imported by or under the orders of a railway company.	....	Ad valorem	2½ per cent.
71	WATER-LIFTS, SUGAR-MILLS, OIL-PRESSES, and parts thereof, when constructed so that they can be worked by manual or animal power.	....	....	Free.
72	All other sorts of IMPLEMENTS, INSTRUMENTS, APPARATUS AND APPLIANCES, and parts thereof, not otherwise specified.	....	Ad valorem	7½ per cent.
<b>DYES AND COLOURS.</b>				
73	DYEING AND TANNING SUBSTANCES, all sorts, and TAINTS AND COLOURS and painters' materials, all sorts—			
	Allazarine dye, dry, 40 per cent. .. ..	lb.	5 0	7½ per cent.
	" " " 50 " .. ..	"	5 8	7½ " "
	" " " 60 " .. ..	"	6 0	7½ " "
	" " " 70 " .. ..	"	6 8	7½ " "
	" " " 80 " .. ..	"	7 0	7½ " "
	" " " 100 " .. ..	"	7 8	7½ " "
	" " moist, 10 " .. ..	"	2 12	7½ " "
	" " " 16 " .. ..	"	3 4	7½ " "
	" " " 20 " .. ..	"	4 0	7½ " "
	Aniline " moist .. ..	"	2 0	7½ " "
	" dry .. ..	"	4 0	7½ " "
	" salts .. ..	"	Ad valorem	7½ " "
	Avar bark .. ..	cwt.	3 12	7½ " "
	Buzgand (gulplsta) .. ..	....	Ad valorem	7½ " "
	Cochineal .. ..	lb.	1 4	7½ " "
	Gallnuts (myrabolams) .. ..	....	Ad valorem	7½ " "
	" Persian .. ..	cwt.	70 0	7½ " "
	Madder or manjit .. ..	....	Ad valorem	7½ " "
	Orchilla weed .. ..	....	"	7½ " "
	Sappan wood and root .. ..	....	"	7½ " "
	Turmeric .. ..	....	"	7½ " "
	All other sorts of dyeing and tanning materials .. ..	....	"	7½ " "
	Lead, red, dry .. ..	cwt.	25 0	7½ " "
	" white, dry .. ..	"	28 0	7½ " "
	Ochre, other than European, all colours .. ..	"	3 0	7½ " "
	Paints, composition .. ..	....	Ad valorem	7½ " "
	" patent driers .. ..	....	"	7½ " "

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	<b>III.—Articles wholly or mainly manufactured—contd.</b>			
	<b>DYES AND COLOURS—contd.</b>			
			Rs. a.	
73	<b>DYEING AND TANNING SUBSTANCES</b> , all sorts and <b>PAINTS AND COLOURS</b> and painter's materials, all sorts— <i>contd.</i>			
	Turpentine .. .. .	Imperial gallon.	3 4	7½ per cent.
	Verdigris .. .. .	....	<i>Ad valorem</i>	7½ " "
	Vermillion, Canton .. .. .	box of 90 bundles.	150 0	7½ " "
	Zinc, white, dry .. .. .	....	<i>Ad valorem</i>	7½ " "
	All other sorts of paints, colours and painters' materials not otherwise specified, including glue and putty.	....	"	7½ " "
	<b>FURNITURE, CABINETWARE AND MANUFACTURES OF WOOD.</b>			
74	<b>FURNITURE, CABINETWARE</b> , and all manufactures of wood not otherwise specified.	..	<i>Ad valorem</i>	7½ per cent.
	<b>GLASSWARE AND EARTHENWARE</b>			
75	<b>GLASS AND GLASSWARE</b> , all sorts, Chinese and Japaneseware, lacquered ware, earthenware, China and porcelain.	....	<i>Ad valorem</i>	7½ per cent.
	<b>HIDES, SKINS AND LEATHER.</b>			
76	<b>HIDES AND SKINS</b> not otherwise specified, <b>LEATHER AND LEATHER MANUFACTURES</b> , all sorts, not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
	<b>MACHINERY.</b>			
77	<b>MACHINERY</b> , namely, prime-movers and component parts thereof, including boilers and component parts thereof; also including locomotive and portable engines, steam-rollers, fire-engines and other machines in which the prime-mover is not separable from the operative parts.			
	<b>MACHINERY</b> (and component parts thereof), meaning machines or acts of machines to be worked by electric, steam, water, fire or other power not being manual or animal labour or which, before being brought into use, require to be fixed with reference to other moving parts; and including belting of all materials for driving machinery. Provided that the term does not include tools and implements to be worked by manual or animal labour and provided also that only such articles shall be admitted as component parts of machinery as are indispensable for the working of the machinery and are, owing to their shape or to other special quality, not adapted for any other purpose.	.. .	<i>Ad valorem</i>	2½ per cent
	<i>Note.</i> —This entry includes machinery and component parts thereof made of substances other than metal, but excludes the articles exempted under Nos. 78, 79 and 80.	..		





## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b>				
<b>METALS, IRON AND STEEL—contd.</b>				
83	<b>IRON OR STEEL—</b>		Rs. a.	
	ANCHORS AND CABLES .. .. .	..	<i>Ad valorem</i>	2½ per cent.
	BEAMS, JOISTS, pillars, girders, screw-piles, bridge work and other such descriptions of iron or steel imported exclusively for building purposes; including also ridging, guttering and continuous roofing.	..	"	2½ " "
	BOLTS and nuts, including hook bolts and nuts for roofing.	....	"	2½ " "
	<b>HOOPS AND STRIPS—</b>			
	Hoops, Lowmoor or Swedish and similar qualities.	....	"	2½ " "
	" other than Lowmoor or Swedish, if galvanised, tinned, or lead coated.	....	"	2½ " "
	" other kinds .. .. .	ton	180 0	2½ " "
	STRIPS, Lowmoor or Swedish and similar qualities.	....	<i>Ad valorem</i>	2½ " "
	" if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	....	"	2½ " "
	" other kinds .. .. .	ton	150 0	2½ " "
	<b>NAILS, RIVETS AND WASHERS, ALL SORTS—</b>			
	Iron nails, rose, wire and flat-headed.. ..	cwt	14 0	2½ " "
	" " other kinds, including galvanised, tinned, or lead coated	....	<i>Ad valorem</i>	2½ " "
	Steel " all sorts .. .. .	....	"	2½ " "
	Rivets and Washers, iron or steel .. .. .	....	"	2½ " "
	PIPES AND TUBES, and fittings therefor, such as bends, boots, elbows, tees, sockets, flanges and the like.	..	<i>Ad valorem</i>	2½ " "
	RAILS, CHAIRS, sleepers, bearing and fish plates, spikes (commonly known as dog spikes), switches, and crossings, other than those described in No. 94, also lever boxes, clips, and tie-bars.	....	"	2½ " "
	<b>SHEETS AND PLATES, all sorts excluding discs and circles which are dutiable under No. 85.</b>			
	Sheets and plates, Lowmoor and similar qualities.	....	<i>Ad valorem</i>	2½ per cent.
	" " Swedish and charcoal .. .. .	....	"	2½ " "
	" " Swedish and charcoal if galvanised, tinned, or lead coated.	....	"	2½ " "
	Plates, other kinds, above ¼ inch thick .. ..	ton	150 0	2½ " "
	Sheets, up to ¼ .. .. .	....	155 0	2½ " "
	Sheets (other than corrugated), and plates, other kinds, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	....	<i>Ad valorem</i>	2½ " "
	Sheets, corrugated, galvanised or black .. ..	ton	240 0	2½ " "
	WIRE, including fencing wire and wire rope, but excluding wire netting (which is dutiable under No. 85).	....	<i>Ad valorem</i>	2½ " "

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	<b>III.—Articles wholly or mainly manufactured—contd.</b>			
	<b>METALS, IRON AND STEEL—contd.</b>			
84	<b>STEEL—</b>		Rs. a.	
	<b>ANGLE—</b>			
	Angle, T .. .. .	ton	145 0	2½ per cent.
	„ „, if galvanised, tinned, or lead coated ..	....	Ad valorem	2½ „ „
	„ „, all other sorts .. .. .	....	„	2½ „ „
	<b>BAR, ROD, AND CHANNEL, including channel for carriages—</b>			
	Bar (other than cast steel) .. .. .	ton	145 0	2½ „ „
	„ Swedish and similar qualities .. ..	....	Ad valorem	2½ „ „
	„ nail-rod, round-rod, and square, other than Swedish or similar qualities, under ½ inch in diameter.	ton	155 0	2½ „ „
	„ galvanised, tinned, lead coated, planished or polished.	....	Ad valorem	2½ „ „
	„ all other sorts .. .. .	....	„	2½ „ „
	Channel including channel for carriages ..	....	„	2½ „ „
	CAST including spring, blistered and tub steel ..	....	„	2½ „ „
	INGOTS, BLOOMS, BILLETS AND SLABS .. ..	....	„	2½ „ „
85	<b>All sorts of IRON AND STEEL and manufactures thereof, not otherwise specified—</b>			
	Iron or steel cans or drums, when imported containing petroleum, which is separately assessed to duty under No. 33, namely:—			
	Iron or steel cans, tinned, other than petrol tins of two gallons capacity.	can	0 3½	7½ „ „
	Iron or steel cans or drums, not tinned, of two gallons capacity.	„	.. 0 2	7½ „ „
	Iron or steel drums of four gallons capacity—			
	(a) with faucet caps .. .. .	drum	1 0	7½ „ „
	(b) ordinary .. .. .	„	0 8	7½ „ „
	Iron or steel, all other sorts, including discs or circles and wire-netting.	....	Ad valorem	7½ „ „
	<b>METALS, OTHER THAN IRON AND STEEL.</b>			
86	<b>CURRENT SILVER, NICKEL, BRONZE, AND COPPER COIN of the Government of India.</b>	....	....	Free
87	<b>GOLD BULLION AND COIN .. .. .</b>	....	....	Free.
88	<b>LEAD, sheets, for tea-chests .. .. .</b>	....	Ad valorem	2½ per cent.
89	<b>SILVER, BULLION OR COIN, not otherwise specified (See Nos. 86 and 136).</b>	ounce	....	Rs. a. p. 0 4 0

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b>				
<b>METALS, OTHER THAN IRON AND STEEL—contd.</b>			Rs. a.	
90	<b>SILVER PLATE, SILVER THREAD and wire and SILVER MANUFACTURES, all sorts.</b> Provided that where the silver contained in an article can be ascertained, or where an official or recognised certificate of assay, in such form as the Government of India may prescribe, is presented showing the amount of silver contained in an article, the Collector of Customs shall levy duty at the rate of 4 annas per ounce on the amount of silver so determined, and at the rate of 7½ per cent. <i>ad valorem</i> on the difference between the value of such silver calculated at the market value of silver and the real value of the article.	....	<i>Ad valorem</i>	15 per cent
91	<b>ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—</b>			
	Brass, orsidue and leaves, European .. ..	....	<i>Ad valorem</i>	7½ per cent.
	" " " China .. ..	....	"	7½ " "
	" patent or yellow metal, sheets and sheathing, weighing, 1 lb. or above per square foot, and braziers and plates.	cwt.	65 0	7½ " "
	" patent or yellow metal (old) .. ..	"	35 0	7 " "
	" sheets, flat or in rolls, and sheathing, weighing less than 1 lb. per square foot.	....	<i>Ad valorem</i>	7½ " "
	" wire .. ..	....	"	7½ " "
	" all other sorts .. ..	....	"	7½ " "
	Copper, bolt and bar, rolled .. ..	....	"	7½ " "
	" braziers, sheets, plates and sheathing..	cwt.	65 0	7½ " "
	" nails and composition nails .. ..	....	<i>Ad valorem</i>	7½ " "
	" old .. ..	cwt.	45 0	7½ " "
	" pigs, tiles, ingots, cakes, bricks and slabs.	"	62 0	7½ " "
	" China, white, copperware .. ..	lb.	2 4	7½ " "
	" foil or dankpana, white, 10 or 11 in. X 4 to 5 in.	hundred leaves	3 8	7½ " "
	" foil or dankpana, coloured, 10 to 11 in. X 4 to 5 in.	"	3 12	7½ " "
	" wire, including phosphor-bronze .. ..	....	<i>Ad valorem</i>	7½ " "
	" all other sorts, unmanufactured and manufactured, except current coin of the Government of India which is free.	....	"	7½ " "

Schedule II.—(Import Tariff)—continued.

No.	Names and Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b> <b>METALS, OTHER THAN IRON AND STEEL—contd.</b>				
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—contd.		Rs. a.	
	German silver .. .. .	....	Ad valorem.	7½ per cent.
	Gold leaf .. .. .	....	"	7½ " "
	Lametta .. .. .	....	"	7½ " "
	Lead, all sorts (except sheets for tea chests) ..	....	"	7½ " "
	Quick-silver .. .. .	lb.	3 0	7½ " "
	Shot bird .. .. .	cwt.	20 0	7½ " "
	Tin, block .. .. .	"	125 0	7½ " "
	" oil, and other sorts .. .. .	"	Ad valorem	7½ " "
	Zinc or spelter, nails .. .. .	....	"	7½ " "
	" " tiles or slabs, soft .. .. .	cwt.	50 0	7½ " "
	" " " " hard .. .. .	"	40 0	7½ " "
	" " all other sorts including boiler tiles. .. .. .	....	Ad valorem	7½ " "
	All other sorts of metals, and manufactures thereof.	....	"	7½ " "
<b>PAPER, PASTEBOARD AND STATIONERY.</b>				
92	TRADE CATALOGUES AND ADVERTISING CIRCULARS IMPORTED BY PACKET, BOOK OR PARCEL POST.	....	....	Free.
93	PAPER AND ARTICLES MADE OF PAPER AND PAPIER MACHE, PASTEBOARD, MILLBOARD, AND CARD-BOARD all sorts, and STATIONERY including ruled or printed forms and account and manuscript books, labels, advertising circulars, sheet or card almanacs and calendars, Christmas, Easter and other cards, including cards in booklet form; including also wastepaper and old newspapers for packing; but excluding trade catalogues and advertising circulars imported by packet, book, or parcel post.	....	Ad valorem	7½ per cent
<b>RAILWAY PLANT AND ROLLING STOCK.</b>				
94	RAILWAY MATERIAL for permanent-way and rolling stock, namely, cylinders, girders, and other material for bridges, rails, sleepers, bearing and fish-plates, fish-bolts, chairs spikes, crossings, sleeper fastenings, switches, interlocking apparatus, brake gear, couplings and springs, signals, turn-tables, weigh-bridges, engines, tenders, carriages, wagons, traversers, trolleys, trucks and component parts thereof; also the following articles when imported by or under the orders of a railway company, namely, cranes, water cranes, water tanks and standards, wire and other materials for fencing. Provided that for the purpose of this entry "railway" means a line of railway subject to the provisions of the Indian Railways Act, 1890, and includes a railway constructed in a Native State under the suzerainty of His Majesty and also such tramways as the Governor-General in Council may, by notification in the <i>Gazette of India</i> , specifically include therein.	....	Ad valorem	2½ per cent.

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	<b>III.—Articles wholly or mainly manufactured—<i>contd.</i></b>			
	<b>RAILWAY PLANT AND ROLLING STOCK</b>			
	— <i>contd.</i>			
94	RAILWAY MATERIAL for permanent-way, etc. — <i>contd.</i> Provided also that only such articles shall be admitted as component parts of railway material as are indispensable for the working of railways and are, owing to their shape or to other special quality, not adapted for any other purpose.			
	<b>YARNS AND TEXTILE FABRICS.</b>			
95	COTTON TWIST AND YARN, and COTTON SEWING OR DARNING THREAD.	....	....	Free.
96	COTTON piece-goods, hosiery, thread other than sewing or darning thread, and all other manufactured cotton goods not otherwise specified.	....	<i>Ad valorem</i>	3½ per cent.
97	SECOND HAND or USED GUNNY BAGS made of jute	....	....	Free.
98	YARNS AND TEXTILE FABRICS, that is to say — Flax twist and yarn and manufactures of flax Haber ashery and Millinery .. .. Hemp manufactures .. .. Hosiery, excluding cotton hosiery ( <i>see</i> No. 96) .. Jute twist and yarn and jute manufactures, excluding second-hand or used gunny bags ( <i>see</i> No. 97). Silk yarn, noils, and warps, silk thread, silk piece-goods and other manufactures of silk. Woolen yarn, knitting wool and other manufactures of wool including felt. All other sorts of yarns and textile fabrics, not otherwise specified.	.... .... .... .... .... .... .... .... ....	<i>Ad valorem</i> " " " " " "	7½ per cent. 7½ " " 7½ " " 7½ " " 7½ " " 7½ " " 7½ " "
	<b>MISCELLANEOUS.</b>			
99	ART, the following works of:—(1) statuary and pictures intended to be put up for the public benefit in a public place, and (2) memorials of a public character intended to be put up in a public place, including the materials used, or to be used in their construction, whether worked or not.	...	....	Free.
00	ART, works of, excluding those specified in No. 99.	....	<i>Ad valorem</i>	7½ per cent.
01	BOOKS, printed, including covers for printed books, maps, charts, and plans, proofs, music and manuscripts	.. .	....	Free.
02	BRUSHES AND BROOMS .. ..	....	<i>Ad valorem</i>	7½ per cent.
03	BUILDING AND ENGINEERING MATERIALS, including asphalt, bricks, cement, chalk and lime, clay, pipes of earthenware, tiles and all other sorts of building and engineering materials not otherwise specified.	....	"	7½ " "

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b>				
<b>MISCELLANEOUS—contd.</b>				
			Rs. a.	
104	CANDLES .. .. .	....	<i>Ad valorem</i>	7½ per cent.
105	CORDAGE AND ROPE AND TWINE OF VEGETABLE FIBRE.	....	"	7½ " "
106	FIREWORKS .. .. .	....	"	7½ " "
107	FURNITURE, TACKLE AND APPAREL, not otherwise described, for steam, railway, rowing and other vessels.	....	"	7½ " "
108	Ivory, manufactured.. .. .	....	"	7½ " "
109	JEWELLERY AND JEWELS, including gold plate and other manufactures of gold, but excluding silver plate and other manufactures of silver ( <i>see</i> No. 90).	.. .	<i>Ad valorem</i>	7½ per cent.
110	MATCHES .. .. .	....	"	7½ " "
111	MATS AND MATTING .. .. .	....	"	7½ " "
112	OILCAKES .. .. .	....	"	7½ " "
113	OILCLOTH AND FLOOR CLOTH.. .. .	....	"	7½ " "
114	PACKING—ENGINE AND BOILER—all sorts, excluding packing forming a component part of any article included in No. 77 and No. 91.	....	"	7½ " "
115	PERFUMERY, excluding perfumed spirits ( <i>see</i> No. 10)—			
	Gowla husked and unhusked .. .. .	cwt.	110 0	7½ " "
	Kapurkachin (zedoary) .. .. .	"	20 0	7½ " "
	Patch leaves (patchouli) .. .. .	"	12 0	7½ " "
	Rose-flowers, dried .. .. .	"	25 0	7½ " "
	Rose-water .. .. .	Imperial gallon	2 8	7½ " "
116	PITCH, TAR AND DAMMER .. .. .	....	<i>Ad valorem</i>	7½ " "
117	POLISHES AND COMPOSITIONS.. .. .	....	"	7½ " "
118	PRINTING AND LITHOGRAPHING MATERIAL, namely, presses, type, ink, brass rules, composing sticks, chases, imposing tables, and lithographic stones, stereo-blocks, roller moulds, roller frames and stocks, roller composition, standing screw and hot presses, perforating machines, gold blocking presses, stereotyping apparatus, metal furniture, paper folding machines, and paging and numbering machines, but excluding paper ( <i>see</i> No. 93).	....	"	2½ " "
119	PRINTS, ENGRAVINGS AND PICTURES, including photographs and picture-cards.	....	"	7½ " "
120	RACKS for the withering of tea leaf.. .. .	....	"	2½ " "

## Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<b>III.—Articles wholly or mainly manufactured—contd.</b>				
<b>MISCELLANEOUS—contd.</b>			Rs. a.	
121	RUBBER tyres for motors and motor cycles, and rubber tubes for tyres, and other manufactures of rubbers not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent
122	SHIPS AND OTHER VESSELS for inland and harbour navigation, including steamers, launches, boats and barges, imported entire or in sections.	...	"	2½ " "
123	SMOKERS' REQUISITES, excluding tobacco ( <i>see</i> Nos. 25 to 27).	....	"	7½ " "
124	SOAP .. .. .	....	"	7½ " "
125	STARCH AND FARINA .. .. .	....	"	7½ " "
126	STONE AND MARBLE, and articles made of stone and marble.	....	"	7½ " "
127	TEA-CHESTS of Metal or wood whether imported entire or in sections, provided that the Collector of Customs is satisfied that they are imported for the purpose of the packing of tea for transport in bulk.	....	"	2½ " "
128	TOILET REQUISITES, not otherwise specified ..	....	"	7½ " "
129	TOYS, playing cards and requisites for games and sports.	....	"	7½ " "
130	UMBRELLAS, including parasols and sunshades, and fittings therefor.	....	"	7½ " "
131	The following ARTICLES, when imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be INTENDED FOR USE IN THE WEAVING OF COTTON or the baling of woven cotton goods:— Aniline blue, Bisulphate of soda, China clay, Chloride of magnesium, Chloride of zinc, Dressalin, Epsom salts, Farina, Farinina, Flannel taping, Glauber salts, Glutina, Glycerine substitutes, Heald varnish, Hoop iron, Hoop steel, Rivets for bales, Sewing needles, Sizing paste, Sizing wax, Soda ash, Starch, Velvet pulp.	....	....	Free.
132	ALL OTHER ARTICLES wholly or mainly manufactured, not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
<b>IV.—Miscellaneous and unclassified.</b>				
133	ANIMALS, living, all sorts .. .. .	....	....	Free.
134	CORAL .. .. .	....	<i>Ad valorem</i>	7½ per cent.
135	FODDER, bran and pollards .. .. .	....	"	7½ " "
136	SPECIMENS illustrative of natural science, including also antique coins and medals.	....	....	Free.
137	ALL OTHER ARTICLES NOT OTHERWISE SPECIFIED, including articles imported by post.	....	<i>Ad valorem</i>	7½ per cent.

**Schedule III.—(Export Tariff).**

No.	Names of Articles.	Per	Rate of duty.
	<b>Jute other than Bimlipatam Jute.</b>		Rs a. p.
1	RAW JUTE—		
	(1) Cuttings .. .. .	Bale of 400 lbs. .. ..	0 10 0
	(2) All other descriptions .. .. .	.. .. .	2 4 0
2	JUTE MANUFACTURES when not in actual use as coverings, receptacles or bindings for other goods.		
	(1) Sacking (cloth, bags, twlst, yarn, rope and twine).	Fon oi 2,240 lbs. .. ..	10 0 0
	(2) Hessians and all other descriptions of jute manufactures not otherwise specified.	.. .. .	16 0 0
	<b>RICE.</b>		
3	RICE, husked or unhusked, including rice flour, but excluding rice bran and rice dust, which are free.	Indian maund of 82½ lbs. avoirdupois weight.	0 3 0
	<b>TEA.</b>		
4	TEA .. .. .	100 lbz. .. ..	1 8 0



## Scientific Surveys.

**The Botanical Survey** is under the direction of the Superintendent of the Royal Botanic Garden, Calcutta, with whom are associated the Economic Botanists belonging to the Agricultural Department. In 1912 the post of Reporter on Economic Products was abolished and replaced by that of Economic Botanist to the Botanical Survey. Much of the systematic botanical work of India is done for the department by forest officers and others. Over 2,000 specimens were obtained in 1911-12 by the officer deputed to accompany the Abor Expedition as botanist, and a material addition was made to the information available as to the vegetation of the little-known frontier region traversed.

**Geological Survey.**—The first object of the Department is the preparation of a general geological map of India. Various economic investigations, which form an increasingly important part of the Department's work, are also conducted. These include investigation of marble and sandstone quarries for the purpose of building Imperial Delhi, the examination of the Korea coal-field in the Central Provinces, of petroliferous localities in the Punjab and North-West Frontier Province, of pitchblende areas in the Gaya District, &c.

**Zoological Survey.**—A scheme for the formation of a Zoological Survey on the basis of the Zoological and Anthropological Section of the Indian Museum, Calcutta, came into force in July, 1916. The proposals as sanctioned by the Secretary of State mainly are as follows:—The headquarters of the Survey will be the Indian Museum. The scheme regarding the Zoological Survey entails the breaking up of the organisation now known as the Zoological and Anthropological Section of the Indian Museum into two parts, one of which will become a Government department under the title of the Zoological Survey of India, and will be primarily concerned with zoological investigation and exercise such advisory functions as may be assigned to it by Government, while the other part will remain as the office of the Trustees of the Indian Museum and will be organised for the present on the lines laid down in the existing by-laws of the Museum. It will be the duty of the Zoological Survey to act as guardians of the standard zoological collection of the Indian Empire, and as such to give every assistance in their power both to officials and to others, in the identification of zoological specimens submitted to them, arranging, if requested to do so, to send collections to specialists abroad for identification in cases in which no specialist is available in India. The Director of the Survey is Dr. Anandale.

**Mammal Survey.**—An important movement has recently been inaugurated by the Bombay Natural History Society which has collected subscriptions for a survey of the mammals of India. This Survey was begun in 1911 with the object of getting together properly prepared specimens of all the different kinds of Mammals in India, Burma and Ceylon so that their distribution and

differences might be more carefully worked out than had been done before, also to form as complete as possible a collection of specimens for the Society's Museum in Bombay. Before the Survey started the Society had a very small collection, and even in the British Museum in London the Indian specimens were very poorly represented. Three trained collectors from England are in the service of the Society and the specimens obtained by the Survey are being worked out at the British Museum and duplicates presented to the different Indian Museums. In India most of the country has been worked on the West Coast from Coorg as far north as Mount Abu, also the Central Provinces, Kumaon and Bengal. The whole of Ceylon has been worked, and so has a considerable part of Burma. At the present time owing to the war only one collector is in the field in Sikkim, the others having gone to the front. Funds for the Survey were raised by subscription from the principal Native Chiefs and some prominent Bombay citizens together with grants from the Government of India, the Government of Ceylon, the Government of Burma, the Government of the Malay States, and the different local Governments as well as donations from the Royal Society, the British Museum and the Zoological Society of London.

**The Board of Scientific Advice.**—This Board includes the heads of the Meteorological, Geological, Botanical, Forest, and Survey Departments, representatives of the Agricultural and Civil Veterinary Departments, and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done, as well as a general programme of research for the ensuing year. The reports and the programmes formulated are communicated for consideration to an Advisory Committee of the Royal Society, who from time to time furnish valuable suggestions and advice.

The Secretary to the Government of India (Department of Revenue and Agriculture) is *ex-officio* President of the Board which includes the Director-General of Observatories, the Superintendent of the Indian Museum, the Surveyor-General of India, the Principal, Punjab Veterinary College, the Director of the Indian Institute of Science, the Inspector-General of Forests, the Agricultural Adviser to the Government of India, the Director of the Geological Survey, the Director-General, Indian Medical Service, the Secretary to the Government of India, Public Works Department, and

the Director of the Botanical Survey of India who is Secretary to the Board of Scientific Advice.

The programme of the various departments for 1915-16 includes the following: The Meteorological Department will continue observational work with pilot balloons at various stations, and will also do some experimental work on vertical air currents at Agra, besides collating charts representing types of weather, with notes giving explanations and references to other cases of occurrence of the same type for daily weather forecasting. In the Astronomical Department a new spectro-heliograph is under construction which, it is hoped, will be completed during the year. Five more seismographs, two at Simla, two at Calcutta, and one at Bombay, the Avine Seismograph at Kodakkanal and several instruments of local manufacture at Bombay will be kept in use during the year. A botanical survey is being carried out, and the Economic Botanist will improve and arrange his exhibits. Plant breeding and plant improvement work will be continued on wheat, tobacco, gram, fibre plants, indigo, oilseeds and fruit. Entomology will include general investigations of crop pests and especially of pests of rice, sugarcane, and cotton, fruit trees, and stored grain, while in pathological entomology a closer connection with veterinary work will be aimed at. Under the head of agriculture the following are the lines of work in progress:—Economics of cultivation by steam and motor engines, puddling of rice land by double engine system of steam cultivation, combination of irrigation and drainage in the growing of rice, study of inheritance of the more important characters of dairy cattle by crossing, building up of milk pedigree in cattle by selection.

**The Indian Research Fund.**—Scientific research work is rapidly developing in India. In 1911 the sum of 5 lakhs (£33,000) out of the surplus opium revenue was set aside as an endowment for research into epidemic diseases in connection with the Central Research Institute, at Kasauli. It was hoped that this sum might be largely augmented by private subscriptions. An Indian Research Fund Association was constituted, and a good deal of work has already been

undertaken. Its objects are defined as "the prosecution and assistance of research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases." Fresh investigations into kala azar and cholera have been inaugurated, and an officer was deputed, at the expense of the Fund, to study yellow fever in the regions where it is endemic, with a view to taking steps to prevent its introduction into India. A further grant of 6 lakhs (£40,000) was made to the Central Research Fund from the opium surplus of 1911-12. It has been decided to devote to research and anti-malarial projects 5 lakhs (£33,000) a year from Imperial revenues commencing in 1913-14. A new periodical, "The Indian Journal of Medical Research," was instituted in 1913 and is published four times annually, as the official organ of the Research Fund. The journal deals with every branch of research directly or indirectly connected with medical and sanitary science, and forms a record of what is being done in India for the advance of this work.

**Survey of India.**—The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. Cadastral surveys are now carried out by the Provincial Land Records and Settlement Departments.

In 1904 attention was drawn to the defective state of the **topographical survey maps**, and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the map of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient reserved for forests and special areas being surveyed on the scale of 2 inches to the mile, and the  $\frac{1}{2}$ -inch scale employed for waste and barrer tracts.

## THE IMPERIAL INSTITUTE.

The Imperial Institute, South Kensington, has been placed by the Imperial Institute (Management) Act of 1916 under the control of the Secretary of State for the Colonies as representing the central authority for the Dominions, Colonies, and Protectorates of the Empire. The actual management of the Institute will be with an executive council of twenty-five members, which, subject to the general control of the Secretary of State for the Colonies, will possess considerable autonomy and will be the governing body of the Institute. India is to be represented on this council by four members, one nominated by the Government of India, two by the Secretary of State for India, and one by the Secretary of State for the Colonies. In addition, it is understood that there will be a special Indian Committee of the Council with co-opted members—an

arrangement which will greatly increase the connection of the Institute with Indian interest and, it is hoped, will promote the development of those activities of the Institute for India which are most needed in England.

An account of the work done by the Institut for India, by Dr. W. R. Dunstan, Director of the Imperial Institute, has lately been published in the *Bulletin* of the Institute.

**The Indian Collections** of the Imperial Institute, which have been completely reorganised in recent years, constitute the Indian Section of the Public Exhibition Galleries. They include a representation of the important raw materials of India, illustrations of its chief industries and their results, tabular information and diagrams respecting Indian trade and commerce, maps, pictures, and photograph of its cities and industries.

**Technical Information Bureau.**—Ever since the Scientific and Technical Research Department was started, a most important part of its work has been, in addition to conducting researches, to collect and critically collate all published information respecting the production and industrial uses of raw materials, and it has gradually come to be recognised as a central clearing-house for information of this character. Merchants and manufacturers in England, as well as producers in India and the Colonies, have applied in increasing numbers for information on these subjects. In order to be in a position to deal more effectively with such enquiries, a special branch of the department was formed in 1914, whose business it is in collaboration with the staff of the Scientific and Technical Research Department, to

collect and distribute technical information. Since the war this branch, known as the Technical Information Bureau, has been very full of work, and has not only dealt with a large number of inquiries as to Indian materials and their possibilities, but has taken the initiative with British manufacturers and merchants in bringing to their notice important Indian materials which await a new market.

The Institute has a library and map rooms, which are important auxiliaries to this work and publishes quarterly the *Bulletin* which has played a conspicuous part in making known throughout the Empire the results of researches conducted at the Institute, and the records of progress in the various aspects of the production and utilisation of commercial and economic materials.

## NATIVE PASSENGER SHIPS.

The following Resolution by the Government of India was issued in October 1913, as a result of inquiries set on foot after the loss of the *Titanic*:—

"The Board of Trade made a comprehensive revision of the scale of boats and life-saving appliances to be provided on board ships in the United Kingdom and appointed committees of experts to deal with collateral questions arising in the same connection. Meanwhile, the maritime local Governments have been consulted as to the necessity for revising the rules which govern vessels in British India, particularly those under the Native Passenger Ships Act, 1887, the Pilgrim Ships Act, 1895, and the Indian Emigration Act, 1908, which are read in the notifications detailed above. The replies show that while a revision is undoubtedly necessary, there is a great divergence of opinion as to the extent to which it is required and the lines on which it should proceed. The subject is one of considerable difficulty and complexity, involving a number of technical and other questions which need careful scrutiny. The Government of India therefore decided to appoint a committee representative of official and non-official interests to enquire generally into the sufficiency of the existing rules and report its views to the Government. The committee consisted of the following President and members:—President, Mr. C. G. Toddhunter, I.C.S., Collector, Madras Presidency. Members—the Hon'ble Sir Fazulbhoy Currimbhoy Ebrahim, Bombay; Commander C. J. C. Kendall, D.S.O., R.I.M., Port Officer, Calcutta; Mr. W. H. Ogston, partner in Messrs. Killick, Nixon & Co., Bombay; Captain P. Dest Cronix, Marine Department, British India Steam Navigation Company, Calcutta."

The Committee met at Bombay and subsequently visited other ports. It was to submit its report to the Government of India on the 1st March 1914, but the report has not been published.

**Difficulties of the Question.**—The appointment of the committee was welcomed by the Press, though some criticisms were directed

against the apparent narrowness of the scope of the inquiry. The whole subject is one of considerable difficulty and complexity. It is well-known that the standards laid down under the enactments now in force are not adequate to provide accommodation for all on board. It would be invidious to specify any one vessel to illustrate the inadequacy of the present standards, but it may roughly be said that, on the assumption that the cubic capacity which should be provided in life-boats should be at the rate of ten cubic feet per adult, the accommodation now provided will only afford room for 20 to 50 per cent. of the number of passengers carried. The question is further complicated by reason of the fact that of a number of native passenger ships many are never out of sight of land during their voyages, and that any insistence on the principle that there should be life-boat accommodation for all on board will necessarily result in the curtailment of the carrying capacity. It is doubtful therefore whether, in the case of passenger ships which are engaged in the carriage of passengers between ports separated by inconsiderable distances, some relaxation should not be allowed in the matter of providing life-boat accommodation for all on board. The matter is thus essentially one for local investigation.

**Working of the Act.**—Under the Native Passenger Ships Act (X of 1887) the term "Native Passenger Ships" is applied to sailing-ships, which carry as passengers more than thirty natives of Asia or Africa, and to steam-ships carrying more than sixty such natives. Local Governments have discretionary power, with the sanction of the Governor-General in Council, to alter these numbers to fifteen and thirty, respectively. A long voyage is defined in the Act as a voyage in which the ship will, in ordinary circumstances, be continuously out of port for one hundred and twenty hours or more and a short voyage as one in which the ship will not, in ordinary circumstances, be continuously out of port for one hundred and twenty hours. The spaces allotted to passengers, and some of her conditions, differ in a long and a short voyage.

## Wild Animals and Snakes.

The number of persons killed by wild animals in British India in 1915 was 1,923. The number killed in the previous year was 1,702. As in 1914 the highest total of deaths in any one province (684) is reported from Bihar and Orissa, where tigers alone killed 376 persons. In the three districts of Angul, Hazaribagh and Singhbhum there were 232 deaths from tigers and the offer of special rewards for man-eaters in part of these districts is said to have had no effect. Altogether 748 persons were destroyed by tigers in British India, a total which compares unfavourably with the corresponding figure of 646 for 1914. In the United Provinces one man-eating tiger in the Alnora district killed 10 persons out of the provincial total of 20; and in the Punjab two deaths are reported which are the first caused by tigers in that province for seven years.

The total number of deaths from snakebite among human beings rose from 22,900 in 1914 to 26,385 in 1915. An increase is noticeable in all provinces except Madras and the North-West Frontier Province. As usual the casualties were most numerous in Bihar and Orissa (8,795), the United Provinces (6,629) and Bengal (4,709). The deaths reported from the Punjab under this head amount to 1,590, which is the highest figure yet recorded for that province. Special measures organised in the districts of Gujranwala and Sialkot resulted in the destruction of nearly 10,000 snakes. In the Bombay Presidency nearly 80,000 veno-

mous snakes were destroyed in the Bate district, where deaths from snake-bite are numerous than anywhere else in the country. Sir Lauder Brunton's lancets are said to have effected a fair number of cures in cases where they were used but on the whole the Government furnished in these reports is not sufficient to furnish a definite verdict on the efficacy of the instrument.

The number of wild animals destroyed during the year under review was 25,036 including 1,582 tigers, 6,623 leopards, 2,775 bears and 2,191 wolves. A sum of Rs. 1,89,409 was paid in rewards. The total number of snakes destroyed was 1,84,663 as compared with 1,18,816 in 1914. Rs. 18,214 were disbursed altogether in rewards for the destruction of snakes.

The number of fresh licenses issued under the Indian Arms Act, 1878, in forms XVI, XVII and XVIII was 23,123 as compared with 23,016 in 1914. The total number of licenses in force in the year under review was 175,896 against 176,779 in the preceding year.

The compilation of the returns showing the number of cattle destroyed by wild animal and snakes has involved in the past an amount of labour disproportionate to the interest of the subject, and the accuracy of the returns themselves has always been open to question. The Government of India have therefore decided that the submission of these returns should be discontinued.

## TIDAL CONSTANTS.

The approximate standard time of High Water may be found by adding to, or subtracting from, the time of High Water at London Bridge, given in the calendar, the correction given as below:—

	H. M.		H
Gibraltar .. .. .	sub. 0 32	Rangoon River Entrance ..	add 1
Malta .. .. .	add 1 34	Penang .. .. .	sub. 1
Karachi .. .. .	sub. 2 33	Singapore .. .. .	" 3
Bombay .. .. .	" 1 44	Hongkong .. .. .	" 4
Goa .. .. .	" 2 44	Shanghai .. .. .	" 0
Point de Galle .. .. .	add 0 12	Yokohama .. .. .	add 3
Madras .. .. .	sub. 5 6	Valparaiso .. .. .	sub. 4
Calcutta .. .. .	sub. 0 19	Buenos Ayres .. .. .	add 4
Rangoon Town .. .. .	add 2 41	Monte Video .. .. .	" 0

# India and the War.

## HOSTILE FIRMS.

It was early realised in India that the adoption, for all purposes, of the classical definition of an enemy would not be sufficient to meet all the political difficulties involved, and on 14th November 1914, with the approval of the Secretary of State, the **Hostile Foreigners (Trading) Order** was issued. The salient feature of this order was the definition of a "hostile foreigner" as a subject of any one of the enemy states without reference to the question of residence. It further gave an absolutely free hand to Government in doubtful cases by defining a hostile firm, as a firm of which a hostile foreigner had been a member or officer on August 3rd, 1914. All such firms or foreigners were forbidden to trade except under a license. The right to refuse such a license or to impose any conditions whatever vested solely in the Government of India. In the event of a license being refused the business assets had to be deposited with Government for disposal at their absolute discretion. It will be seen that the immense scope of the definition of a hostile firm brought within the purview of the order numerous British and neutral firms who happened to have German shareholders, or perhaps a German subject as branch manager. To meet some of these cases a **general exemption** was issued in favour of companies who had no hostile foreigners as officers and merely had capital of amount less than one-third of the whole in enemy hands. An exemption was also made on political grounds in favour of Asiatic subjects of Turkey. In other cases where the interests involved were mainly British, licenses to carry on trade were given, subject, of course, to the provisions of the Royal Proclamations.

There remain the cases on which public attention has naturally been focussed, where the interests involved are mainly or entirely hostile. It was considered desirable that these businesses should be wound up as far as possible and though the Order gave power to Government to take possession and themselves to conduct the liquidations, it was considered more satisfactory to issue to these firms licenses which restricted their operations to winding up, and subjected them to a strict control. The proceeds of such liquidations are being held by Government, and though their total figure has not as yet been made public, it must run into several crores of rupees.

The great majority of firms of this class are of **German origin**, and their principal strongholds in India have been in Bombay, Calcutta and Rangoon. Elsewhere in India the chief feature of their enterprise has been the successful way in which they have fostered indigenous industries through the agency of **Christian Missionaries**. The best known example is the case of the Basel Mission whose products, notably their roofing tiles, are familiar throughout the west of India. Apart from these cases, where religious and commercial endeavours have gone hand in hand, the German has not obtained any very noteworthy foothold in the

continent. A few planters, a few shopkeepers in the larger towns, a hotel proprietor or two are to be found, but there is no special line that they have made peculiarly their own. These small businesses have been either wound up or placed under Government control in practically every case. The men of military age have been interned and those outside the age limits and the women and children for the most part repatriated.

The more striking features of Teutonic commercial enterprise at the three great ports are different in each case. In **Rangoon** at the outbreak of war there were three large rice-mills whose directors, shareholders and European employees were almost without exception, German. The total value of these three properties has been estimated at three-quarters of a million sterling. The largest of them is believed to have been subsidised by the German Government with a view to their perpetually maintaining a large stock of rice in Germany against emergencies like the present.

One of these rice-mills has been leased to a British firm and all payments are made by the latter to Government account. The other two firms have been made to wind up their affairs, their resulting balance also being deposited in the Government Treasury. One or two less important Teutonic firms engaged in rice milling and a number of small miscellaneous concerns and branches of hostile firms in other parts of India have also been treated in the same way.

The salient feature of the **German enterprise in Calcutta** has been the hide export traffic. In this business a ring of some half dozen German firms had, of late years, established a practical monopoly. As they formed the main channel for the export of an important indigenous product, and as British firms have not proved anxious to undertake this exceedingly unsavoury trade, these firms were for a time allowed to continue their business under British or neutral management, with a strict supervision by the officer appointed by Government to control hostile firms in Bengal. Other German concerns in Calcutta have been wound up. They are mostly small miscellaneous businesses with two exceptions. One is a large import and export firm which has figured prominently in the manganese trade in the Central Provinces and elsewhere. The other is a branch of a German Bank, the only German Banking concern in India.

In **Bombay** the hostile firms which have aroused most interest have been those engaged in the synthetic colour trade which in the last three decades has almost annihilated the indigenous indigo industry. (See article on Indigo). Prior to the war dyes valued at about one million sterling were annually imported into India, and almost the whole of this quantity came from Germany and was shipped to the five German colour agencies in Bombay. Notwithstanding the

large stocks in India at the beginning of August 1914, the stoppage of this supply has been one of the most serious and most widely felt commercial blows that India has suffered as a result of the war. The textile mills have suffered heavily, but much more serious has been the case of the handloom weavers in small villages all over India. Had Government been far-sighted enough to have assumed control of these stocks immediately war broke out, it is very doubtful if they could have done much to assist the petty weavers and dyers, whose complete lack of organisation renders help on a large scale well nigh impossible. As a matter of fact not only were Government unprepared but the commercial community themselves did not recognise the gravity of the situation until the mischief was done. By the month of November when Government assumed control of these firms three had practically disposed of their whole stock, much of which had gone into the hands of speculators with the result that prices had increased enormously. In a fourth the stock was the property of a neutral, and the fifth alone had a considerable balance. Part of this was distributed among the textile mills and a further quantity sold retail to the smaller consumers. This latter policy did not prove very successful and on the arrival in Bombay of a captured German steamship with a considerable quantity of dyes which had been condemned as Prize of War and were to be sold accordingly, it was decided to auction the balance (about one-sixth of the original stock), after reserving a further supply for distribution to the textile industry. Prices at this auction, though considerably exaggerated in the Press of the day, were none the less very high; and the profits made over the sale of this firm's stock as a whole must have been considerable. These funds are, of course, all held by Government at present, and one of the difficult problems which Government will have to solve when the terms of peace are under consideration will be the disposal of these profits. In addition to these dye-firms, there were in Bombay several considerable import merchants and a number of smaller concerns of a hostile nature to whom also the closure has been applied.

The policy adopted in the early months of the war by Government in the matter of hostile firms came in for a good deal of criticism, largely, be it said, from misinformed quarters. The view of the average patriotic Briton is "wind them up completely," but many critics who have voice in this cry have overlooked the fact that to wind up a concern necessitates not only the payment of all its liabilities and the sale of all its stock, but also the collection of all its debts. The man in the street would no doubt like to see Germany after the war with neither debts nor liabilities in India. But his brother in the next street whose business has suffered from the effects of the war naturally resents being forced to pay his debts to a German firm, even though the firm's moneys are held by Government. In this matter Government has adopted a middle course. Hostile firms in liquidation have been allowed to collect their debts, but coercion has only been allowed where there were corresponding liabilities to be met, and a number of firms have been closed down after

allowing them a reasonable period, with a proportion of their outstandings left under what is in effect a moratorium till the end of the war.

**Enemy Trading Ordinance, 1916.**—In June, 1916, the Government of India promulgated an ordinance dealing with the liquidation of hostile firms and the property of hostile persons, which brought the legislation in this country into close accord with the present state of the English law. The British Trading with the Enemy Amendment Act of 1916 enables action to be taken in the case of firms whose business, by reason of enemy nationality or association, is carried on wholly or mainly for the benefit of enemy subjects. It also gives power to the Board of Trade to abrogate contracts or transfers, a power which it is believed has for obvious reasons been very sparingly exercised. It also enables a company containing enemy elements to purge itself thereof with the assistance of the custodian, who may permit the British shareholders to buy out enemy shareholders, depositing the price so paid with the custodian. The ordinance follows the English Act closely with such modifications as local circumstances require. It enables Government to wind up hostile businesses much on the lines of the Indian Companies and Insolvency Acts, the distribution of assets so realized being subject to special rules. The liquidator has power to give a good title to purchasers of the goodwill of hostile businesses and to the immovable property held by them. The new procedure represents a considerable advance from that previously adopted in that the initiative for liquidation comes from the liquidator and is not left nominally with the firm itself. It also enables hostile businesses dealt with to be completely extinguished, thereby preventing any chance of their recovering from a state of suspended animation and resuming business after the conclusion of peace. An additional provision contained in the ordinance relates to the property of hostile persons or associations not engaged in trade. The Hostile Foreigners Trading Order contained no provisions for dealing with non-trading persons or associations.

In considering the total volume of trade handled by hostile foreigners one is struck by the fact that it represented before the war only a comparatively small proportion of the total trade between India and Germany and Austria. The dye business was done almost entirely through Germans but apart from this particular line the bulk of imports from and exports to Germany and Austria passed through British or neutral firms in India. The ultra-patriot cries out for a complete boycott of goods from these countries after the war. This policy will hardly appeal to thinking men. It is almost on a par with the brilliant suggestion put forward in a reputable Anglo-Indian newspaper that it should be made an offence to be in possession of German-made goods. Any such goods found were to be sold immediately on the conviction of the owner. No suggestions were made as to the treatment of the purchaser. No, the victorious allies will not serve any good purpose by attempting to annihilate the productive power of Germany and Austria. The Teutonic Empires, once the cancerous growth, which has vitiated their whole being,

has been excised, will still constitute a body eminently useful for the economic service of the world at large. But this body must be confined within limits, and the moral to which a consideration of this question of hostile trade in India points, is that the Teutonic body can be made a thoroughly useful servant, even though its activities are confined to its own territories. In other words India can do just as big a trade with Germany as before without a single German being allowed to reside in India. In every branch of trade with Germany and Austria except the dye-business, the bulk of the produce is handled by British and neutral concerns. When the war is at an end, trade must be resumed with the enemy Powers, but there is no reason why any German or Austrian should ever again reside in this country for his profit.

**Preventive Measures.**—In reply to a question in the Imperial Legislative Council Sir Reginald Craddock said:—

"No persons have been deported under Bengal Regulation III of 1818. The number detained under that Regulation since the outbreak of war is 56, of whom three have been released.

The total number of persons whose movements have been restricted by internment either in their villages or elsewhere under the Defence of India (Criminal Law Amendment) Act 1915 is 433 made up as follows:—

Madras .. .. .	1
Bombay .. .. .	13
Bengal .. .. .	238
United Provinces .. .. .	4
Punjab .. .. .	114
Burma .. .. .	40
Bihar and Orissa .. .. .	3
Central Provinces .. .. .	Nil.
Assam .. .. .	1
North-West Frontier Province .. .. .	3
Coorg .. .. .	9
Delhi .. .. .	7
<b>Total .. .. .</b>	<b>433 "</b>

## GOVERNMENT CONTROL OF WHEAT EXPORTS.

The circumstances which led the Government of India to undertake the control and marketing of the Indian wheat exports were peculiar. There was a very large wheat crop in India in the season 1914-15, and the surplus available for export was estimated at two million tons. In ordinary circumstances, therefore, India might have looked forward to a brisk season, with the internal prices at reasonable rates. But the economic disturbances set up by the war and the operations of speculators produced a complete bouleversement. The supply of ready wheat in India was concerned and the prices forced up to famine level. At the same time there were large operations in the new crop. The great wheat-eating provinces in India are the Punjab and the United Provinces. In parts of the Punjab wheat was forced up to six seers a rupee, which is a rate which inflicts severe distress on the consuming class, and the position was such that action was imperative. There had been widespread agrarian trouble in the Western Punjab, which whilst inflamed by rumours of the war nevertheless was largely caused by the high prices, and experienced officers were convinced that if the progressive rise in values was not checked there would be extensive rioting and looting of grain shops in the Punjab and the North-West generally. Government were pressed to take two courses—to prohibit the export of wheat until prices came down to the level of nine seers per rupee and on the other hand to let the market take its course, on the supposition that the high prices realised by the growers would compensate the consumers for the famine prices which they had to pay for their food. The unofficial view of the question will be found reflected in an interesting debate in the Imperial Legislative Council (s.v. *Work of the Legislative Council*). As a preliminary step the export of wheat from December to March was limited to 100,000 tons

(92,000 tons only were shipped) and in March all exports on private account were prohibited for a year. These were temporary measures: Government took a quite different and even more heroic course—they took the whole of the export trade under their own control.

**The Official Policy.**—The scheme adopted by Government involved the total prohibition of the export of wheat on private account with the exception of wheat purchased in fulfilment of actual sale contracts prior to the date of Government's announcement of their policy. The firms ordinarily engaged in the export of wheat from India were employed as Government agents and were remunerated by a commission of 3 d. per quarter for buying in India and 8 d. per quarter for selling in England plus a fee of 1 per cent. for guaranteeing the home buyer. The supervision of the scheme in India was in the hands of the Wheat Commissioner, subject to the orders of the Government of India; the Indian Wheat Committee, of which the Chairman was Lord Lucas, was appointed to supervise operations in England. Wheat was chartered in England under the direction of the Committee. Any profit, after payment of all charges arising out of the differences between the sale of the wheat at its natural price in England and its purchase at the officially regulated price in India was to form part of the revenues of the Government of India, while the British Treasury guaranteed the Government of India against any loss.

A Resolution has been published by the Government of India covering a report by the Wheat Commissioner on the working of the scheme from April to October 1915. This report covers the period during which important operations were undertaken. Wheat was obtained without difficulty from April to July, the maximum

price fixed by Government being reduced gradually from Rs. 5-12-0 per maund *i. o. b.* to Rs. 4-10-9. Of the wheat purchased during this period 528,583 tons were shipped to the United Kingdom, 458,057 tons being despatched from Karachi, 40,870 tons from Bombay and 29,606 tons from Calcutta. In addition, 5,016 tons were sold to the Government of Western Australia. Of the wheat despatched to the United Kingdom one cargo of 5,644 tons was sold to the Belgian Relief Committee and discharged at Rotterdam, and about 1,000 tons were sold to the Military authorities and discharged at Malta. Government's limit of Rs. 4-10-9 remained in force until March 1916, but it was not until the close of this period that this price again began to attract wheat. The limit was maintained by Government mainly to test the market, since the greatly increased cost of freight in 1916 left little or no margin of profit at that rate. 2,595 tons were shipped to the United Kingdom in April 1916, making the total shipment to the United Kingdom on Government account 531,128 tons. In addition, the shipments to the United Kingdom on private account subsequent to the introduction of the Government scheme were 95,440 tons. Throughout the period of Government control the shipment of Indian wheat was allowed on private account to Eastern markets where there is an Indian population, these shipments being under the control of the Wheat Commissioner, and export of wheat flour was also permitted under a system of allotments to the flour mills. The amount of wheat flour exported in 1915-16 was 58,808 tons.

**Results of the Scheme.**—The Indian Government's scheme was immediately successful in reducing Indian prices to a safe level. It also succeeded in placing the undoubted Indian surplus of wheat at the disposal of the population of the United Kingdom during the inter-harvest months when the United Kingdom was most in need of supplies from India. Wheat prices in England fell from 69 shillings per quarter *c.i.f.* in April to 49s. 9d. in the middle of June, this being the lowest price received for the Indian Government's shipments. Prices rose again in July and August but not to their previous level, the average price being 55 to 56 shillings. To this fall in Home prices the Indian Government's shipments undoubtedly contributed.

Whilst accomplishing these ends the scheme secured a good profit to the cultivator, which is estimated at twenty-five per cent. above normal. The Government price never worked out at less than three rupees eight annas per maund at Lyallpur, the great wheat market in the Punjab, and in normal times the cultivator is satisfied if he sells his crop at three rupees.

The one point in which the Government scheme is open to serious criticism is the method adopted for financing the wheat firms in India. About the end of May the Secretary of State decided that the Government of India should place funds from their own resources at the disposal of the Agent firms, thus avoiding transactions between England and India in connexion with purchases to be made and paid for in India.

Special arrangements were made in respect of sums provided by the agent firms for the purchase of wheat on Government account before

the publication of the Government's decision. The firms had the option of taking repayment either in India or (at the rate of 1s. 4d. the rupee) in England. In the latter case payment was made at the date on which a demand bill reached England.

This decision was very hotly criticised. It was argued that it was no real economy; also that it was responsible for a break in exchange and a large demand for sterling bills on London, or Reverse Councils as they are now called. Further, it temporarily destroyed the means of livelihood of certain brokers who depend on this business. But inasmuch as the British Treasury had guaranteed the Government of India against loss, whilst agreeing that India should take any profit, the decision of the Treasury was final.

The payments made to the agent firms in India amounted to Rs. 6,98,63,283-11-5, of which Rs. 2,65,65,129 represents payments in sterling made by the Secretary of State. To this must be added the cost of the Wheat Commissioner's establishment, *viz.*, Rs. 77,155-14-10 from the 1st April 1915 down to the 30th April 1916. The estimated profit is about £180,000. This figure is a good deal less than was anticipated at the commencement of the scheme—ambitious people saw a profit of a million or two in it. The surplus available for export proved to be much smaller than was thought; the official estimate of the yield of the 1915 crop was 10,293,000 tons which should have left an exportable surplus of at least 2,000,000 tons. The Home Committee also held on too long, and when the unexpected break in prices occurred they saw their prospective profits disappear. Then Government carried their own insurance: two of the wheat ships were sunk, one by a submarine, whilst another was wrecked when approaching the Mersey.

**Private export resumed.**—By the end of April 1916, the situation had materially altered. The new season's crop in India was beginning to come forward and prices were very much lower than in the preceding year; the demand from the United Kingdom also was less urgent. The Government of India therefore decided to abandon the scheme of Government purchase and allowed private export to be resumed from the 1st May 1916, retaining only control over the total quantity exported by means of a system of allotments to the exporting firms. Purchases by the firms were at first on a very small scale since the high cost of freight left very little margin of profit between Indian and Home prices; but in the period from August to October helped by the favourable prospects of the monsoon and by steadily rising prices for wheat in England, much larger purchases were made. By the end of October it was estimated that 550,000 tons had been bought for export, nearly all at Karachi.

**The Wheat Commission.**—During October unfavourable reports began to be received of the prospects of the American and Canadian crops, which had been severely damaged by rust. Prospects of the harvest in England also were poor and the price of wheat rose to 80 shillings per quarter. A Royal Wheat Commission was appointed in England to regulate supplies and



prices of wheat in the United Kingdom and it was soon announced that the Commission would resume Government purchases in India. The detailed arrangements for purchase by the Wheat Commission in India have not yet been made public; but it is understood that the Commission will reintroduce the main principles of the original wheat scheme. The Indian exporting firms will again act as Government agents on a fixed commission, the detailed allotments to the firms being arranged by the Commission within the total sanctioned for each port by the Indian Government. Freight will be provided

by Government. The system of direct finance which, as explained above, was the feature most severely criticised in the original wheat scheme, will be changed and the exports will be financed in the ordinary way by the drawing and negotiation of Bills of Exchange.

It has been announced that the Government of India are prepared to allow 400,000 tons of wheat to be exported between November 1916 to January 1917, provided that prices in India are not raised to a level which the Government of India consider dangerous.

Statement showing the **export of wheat** from British India by sea to foreign countries during each month from April 1915 to October 1916—

				1915-16.		1916-17.	
				Tons	Rs.	Tons	Rs.
April	..	..	..	10,650	15,53,480	(a) 3,183	3,86,047
May	..	..	..	(a) 104,060	1,44,06,076	2,094	2,30,872
June	..	..	..	(a) 291,886	3,78,56,036	41,909	48,00,691
July	..	..	..	(a) 187,506	2,33,87,249	44,038	49,03,281
August	..	..	..	(a) 47,861	58,85,547	74,911	86,72,571
September	..	..	..	(a) 5,765	7,51,703	138,736	1,64,59,146
October	..	..	..	381	57,642	150,900	1,87,82,289
November	..	..	..	245	36,677	....	....
December	..	..	..	297	44,507	....	....
January	..	..	..	456	58,473	....	....
February	..	..	..	(a) 1,893	2,50,288	....	....
March	..	..	..	920	1,18,916	....	....
TOTAL ..				652,880	8,44,06,594	....	....

(a) Include exports on Government account	94,357 tons	in May 1915
" " " "	249,052	" in June 1915.
" " " "	150,295	" in July 1915.
" " " "	36,483	" in August 1915
" " " "	2,375	" in September 1915
" " " "	1,000	" in February 1916
" " " "	2,595	" in April 1916.

## EXPORT OF TANNED HIDES.

The production of rough-tanned cow hides known as East India Kips has for a long time been an important trade in Madras and Bombay (see p. 348). These kips are exported to the United Kingdom and after further treatment by curriers are used principally for the upper leather of boots. The demand for upper leather in

England has been phenomenal since the commencement of the war on account of the very large contracts for boots for the British Army and our Allies undertaken by British manufacturers under the direction of the Royal Army Clothing Department. In order to regulate the prices payable for the tanned hides and also to

increase the supply, arrangements were made in August 1916 by which the Indian Government undertook the purchase in India of all East India Kips suitable for Army work. These are being bought in Madras and Bombay by the Indian Government and shipped to the War Office. Prices for the various grades and tannages have been fixed. In Madras purchases are made by Government from the 14 principal exporting firms previously engaged in this trade, allotments being made to the firms in proportion to their previous business. Freight is provided by Government. In Bombay an Agent has been appointed to purchase from the tanners direct and ship to the War Office. The Government of India have placed the control of the scheme in India, under their direction, in the hands of the Wh at Commissioner who is assisted by Mr. J. Wright Henderson, of Messrs. Wood Malvenan & Company of Glasgow, representing the War Office. The average number of tanned hides exported monthly from Madras is at present between 200,000 and 250,000 valued

at 175,000£ to 200,000£. Exports from Bombay are very much smaller, a large portion of the supplies suitable for Army leather being used in India.

The export of **raw hides** is another subject still in a state of flux. Germany's place in this tradesince the war has largely been taken by the U. S. A. and Italy. Since 1st April last exports of weights required for Army leather were restricted to the normal in the case of the U. S. A., "the normal" being very liberally interpreted to allow for normal expansion. At the end of 1916, however, the continued rise in raw hide prices, the difficulty of obtaining supplies for the Madras and Bombay tanners and the increasing demand from the U. K. led the Government of India to announce that after 31st December 1916 (allotments having been given quarterly) no further allotments would be given for export to countries other than the United Kingdom or allied countries of raw hides of weights required for Army work, viz., 6 to 18lbs. arsenicated, and 9 to 24 lbs. dry salted.

## THE WOOL TRADE.

The demand for export of Tibetan Wool mainly to the United States of America, caused a great rise in price of this class of wool during the last quarter of 1915 and rendered it difficult for the Woollen Mills in the north of India which were engaged on important Government contracts, to obtain sufficient supplies. The embargo on export of Tibetan wool which had been removed in September 1915, was therefore re-imposed in January, 1916, and arrangements were made for the direct purchase by Government, for supply to the Northern Indian Woollen Mills, of all Tibetan wool entering India through the State of Sikkim. The Defence of India (Wool Purchase) Rules published in the *Gazette of India* on the 16th February, 1916 prohibited the purchase of such wool except under license from Government, the control of licenses and purchases being placed in the hands of the Wheat Commissioner for India. The price fixed by Government was Rs. 34 per maund at Kalimpong for the first month and subsequently Rs. 32, except during the monsoon period when Rs. 29 was paid. The price from the 1st November 1916 to the 31st May 1917

has been fixed at Rs. 32. Prior to the introduction of Government purchase prices as high as Rs. 35 and Rs. 36 had been paid, but the average price in previous years was in 1912 Rs. 24-8; in 1913, Rs. 27-4; in 1914, Rs. 29-12; and in 1915 Rs. 25.

In the year ending 31st March 1916 the quantity of Tibetan Wool imported into India by this route exceeded 60,000 maunds, being 22 per cent. in excess of the previous year's imports. Between the 16th February, 1916 and the 31st October, 1916, 35,300 maunds were purchased by Government at a cost of Rs. 11,41,000.

**Madras Wool (Black and Grey).**—The export from India of this wool, which is largely used in the manufacture of Army Blankets by the Bangalore and Bombay Woollen Mills, has been prohibited; further, in order to prevent the wool being railed from Madras to areas further north, where it could be mixed with Dekkan and similar wools and so evade the export restriction, transport by rail from stations within the Madras Presidency has been regulated by a system of licenses controlled by District Collectors.

## WAR AND TRADE.

In the section Indian Trade (see pp 248-258) the effect of the war on the trade of India is fully analysed. The official year in India however runs from April 1st to March 31st and this review does not carry us beyond the 31st March 1916. The latest official returns dealing with Indian trade carry us down to September 1916 and they are summarised here. They show the degree to which this trade has recovered from the shock of war.

**Trade. April to November, 1916.**—During the eight months ended November, 1916, as compared with the corresponding period of 1915 the value of the imports increased by over Rs. 12½ crores to Rs. 101·6 crores, and the total exports, including re-exports and the value of

wheat and tanned cow hides, exported on Government account, advanced by over Rs. 30½ crores to nearly Rs. 157 crores. The exports of Indian merchandise showed an increase of Rs. 28½ crores or 23 per cent. and re-exports of Rs. 2,01 lakhs. The grand total of imports, exports and re-exports amounted to nearly Rs. 258½ crores as against Rs. 215½ crores.

Imports of treasure (private and Government) increased by Rs. 15·46 crores to Rs. 24·2 crores. Gold bullion rose by Rs. 3,32 lakhs to Rs. 6,77 lakhs, but sovereigns fell by Rs. 5 lakhs to Rs. 44 lakhs. Imports of silver increased by Rs. 12·19 crores to Rs. 16·85 crores. Exports of treasure decreased by Rs. 1·07 crores to Rs. 4·68 crores.

**Balance of Trade.**—India's balance of trade during the eight months, April to November, 1914, 1915, and 1916, is shown in the following table:—

	Eight months, April to November		
	1914.	1915.	1916.
	Rs. (lakhs)	Rs. (lakhs.)	Rs. (lakhs.)
Exports of private merchandise, including re-exports .. .. .	1,27,76	1,26,50(a)	1,56,85(a)
Imports of private merchandise, including re-exports .. .. .	99,40	89,03	1,01,61
Excess of exports over imports	28,36	37,47	55,24
Net imports of gold (private) .. .. .	6,20	—51	7,31
„ silver (private) .. .. .	6,28	3,82	—2,15
Net imports of treasure	12,48	3,31	5,16
<b>TOTAL NET (private) EXPORTS ..</b>	<b>15,88</b>	<b>34,16</b>	<b>50,08</b>

**Shipping.**—The tonnage of vessels entered at ports in British India from Foreign countries and British Possessions with cargoes during the eight months April to November, 1916 amounted to 2,712,037 tons, and the tonnage cleared to 3,971,062 tons as against 2,991,058 tons entered and 3,930,824 tons cleared during the corresponding period of 1915.

**Finance.**—The Indian financial year ends on the 31st of March in every year. In the section dealing with Finance as a whole (see page 181) the general position up to that date is indicated. This shows that the year 1915-16 closed with a deficit of £2 64 millions. A deficit was anticipated when the budget was framed, but it was arranged to meet it by temporary borrowings, inasmuch as it was hoped the war would be over by the end of the year. It was therefore impossible to continue budgeting for a deficit, and the import tariff was raised from five to seven and a half per cent. with a ten per cent. duty on sugar, export duties were levied on tea and jute, the income tax and the salt tax were raised, the additional imports being calculated to yield £3 6 millions. By this means a gross Imperial surplus of a million was budgeted, for, which after allowing for excess expenditure by the Provinces was reduced to £687,000. Indian budgets, it must be understood, are based on the expectation of a normal rainfall. When the rainfall is abundant, there is a surplus when the rainfall is in defect there is a deficit. The rains of 1916 were unusually abundant and other causes combined to swell the revenues. The railway receipts in particular far transcended the estimates. At the time of writing they are approximately  $4\frac{1}{2}$  crores of rupees above the estimates. Even allowing one half of this total for working expenses, it appears that the railways will return the State some three crores

of rupees more than the estimate. In other directions the revenue has also come in well and a handsome surplus is assured. Whilst severe economy has been observed in all departments of the State where it was practicable, military expenditure has inevitably expanded; this will reduce the surplus, but nevertheless it is bound to be handsome. It is necessary to remember that a surplus was confidently relied upon when the budget was framed. In a country like India, where the Government is behind the banks and not the banks behind the Government, it is desirable at all times that the State should be well provided with funds. This was doubly the case when war had dislocated finance, and when capital was made unusually timid by war conditions.

**Debt.**—Fortified by these resources the Government of India discharged all its floating debt in London, and to that extent lightened the burden on the London money market. It had been hoped to do this by borrowings in India. The loan programme provided for a loan of six crores in India in order to meet the requirements in the country. But the loan took the form of a scheme for the conversion of the existing three and three and a half per cent. Government Paper, which had depreciated with all other gilt-edged securities. Government expressed its willingness to receive subscriptions to the extent of twelve crores; the actual yield was six and three quarter crores.

**The Currency.**—The most remarkable features in connection with the financial history of the war were associated with the currency. The currency of India consists of silver rupees costing approximately eleven pence half penny, with an exchange value of one and four pence, a paper currency, and before the war sovereigns circulated freely in several provinces, notably

in Bombay, the Punjab and the Central Provinces, and to a lesser extent in Madras. The anxiety was lest the value of the rupee should decline so severely, owing to the demand for Home remittances, that it would be difficult to maintain its gold value. In order to maintain this gold value the Gold Standard Reserve (g.v.) was built up out of the profits on coining. When the war broke out this anticipation was partly realised; there was an immediate demand for sterling remittances, which reached £3 millions before it was satisfied. But thereafter the embarrassments of Government arose not from a demand for gold, but for silver. The balance of trade in favour of India is liquidated in normal times by the importation of gold and silver bullion, and the expenditure which has to be met in London for the Home Charges. But during the war the Government of India had to meet heavy expenditure in India on account of the Home Government, which far more than counterbalanced the Home Charges. The import trade declined, owing to the high range of prices, reduced production in the United Kingdom and the scarcity of freight. Gold and silver could not be imported because of the demand for the precious metals for State purposes all over the world. At the same time the balance of trade in favour of India rose enormously, owing to the high values of all kinds of produce. The only way of liquidating this balance was by the sales of Council Bills. That is to say, in return for gold tendered in London (which was invested in Treasury Bills) the Government of India issued rupees in India. These rupees could be provided from two sources only—from the treasury balances of the Government of India and from the rupees in the Paper Currency Reserve. The demand for rupees attained its maximum in the closing months of 1916, to finance first the jute crop and then the cotton crop. At the same time the Treasury balances were depleted by the expenditure on behalf of the Home Government, leaving the Paper Currency Reserve, to bear the whole strain. At first Council Bills were sold freely. This was of the greatest importance to the financial situation, which was eased thereby. In the month of November alone the sales amounted to ten crores of rupees. The Government had made what were thought to be ample preparations to meet the demand. Silver was purchased, rupees were coined, and a large metallic reserve was created. But no reserve could stand this drain, especially as it would be the middle of January, when the revenue comes in, before the Treasury balances would be in a position to bear a share of the strain. To provide funds for this metallic reserve power was taken to increase the invested portion of the Paper Currency Reserve by twenty-four crores of rupees. Consequently on

December 16th there was published a notification to the effect that the Secretary of State would decline to sell any intermediate Bills and would limit his total sales to eighty lakhs for the following week.

The text of this announcement was as follows:—"The Government of India now announce that it has been found necessary to take further steps for relieving the situation by imposing certain restrictions upon the sale of council drafts. The Secretary of State for India-in-Council has accordingly given notice that intermediate sales by him of bills and telegraphic transfers on India are suspended for the present but tenders will continue to be received and allotments made on Wednesdays and on December 30. Tenders will be received for Rs. 80 lakhs. No allotments will be made at lower rates than 1s. 4½d. per rupee for bills and deferred telegraphic transfers and 1s. 4 7-32d. for immediate transfers. Allotments of council drafts on December 20 will also not exceed Rs. 10 lakhs to any one person."

This announcement coming on the top of a declaration that the Government would take whatever steps necessary to provide for the needs of trade, caused a serious disturbance in the market. The banks were operating in the belief that they would secure an unlimited quantity of Bills, they were suddenly told that the total amount sold would be less than one-third of their requirements. The first effect was to put an almost complete stop to the export trade; the situation was however soon relieved and the sales were raised to a hundred and twenty lakhs in the following week and continued at that figure.

**Special War Loan.**—On January 17, 1917, the following *communiqué* was issued at Delhi:—"The Government of India and the Secretary of State have been in frequent communication since the war began with reference to the desirability, or otherwise, of raising a special war loan in India, for reasons which will be fully examined in the forthcoming financial statement for 1917-18. It has now been decided to raise such a loan in that year. No limit of amount will be prescribed. The whole amount obtained will be given to His Majesty's Government to assist in the prosecution of the war and the Government of India hope for a large response. The announcement in regard to the exact terms and the character of the loan must be deferred till the presentation of the financial statement, but the conditions will not be less favourable than those of the Home Government's borrowings. In view of this decision it has also been settled that no rupee loan will be raised for Indian purposes in 1917-18."

## RELIEF FUNDS.

On the initiative of His Excellency the Viceroy a large sum of money has been raised in India for the relief of distress caused by the war. A Central Committee was formed, over which the Viceroy presided and which included the Governor of Bengal, the Governor of Madras, the Governor of Bombay and the Commander-in-Chief, the members of H. E. the Viceroy Executive Council, the heads of other Local Governments and Administrations and the following Ruling Chiefs:—Their Highnesses, the Maharaja of Bikaner, the Begum of Bhopal, the Maharaja of Gwalior, the Nizam of Hyderabad, the Maharaja of Indore, the Maharaja of Jaipur, the Maharaja Regent of Jodhpur, the Maharaja of Kashmir, the Maharao of Kotah, the Maharaja of Mysore, the Maharaja of Patiala, the Maharaja of Rewa, and the Maharana of Udaipur.

Under its control an executive committee was formed and local branches were constituted. The treasurer of the Fund was at first the late Sir A. Kerr who was succeeded by Mr. Henry (General Manager of the Alliance Bank of India) and the Joint Secretaries are Mr. F. W. Johnston and Major John Mackenzie.

Among the provincial offshoots of this fund is the **Women's Branch** of the Bombay Presidency Fund, which was started by Lady Willington, with the object of collecting comforts for the troops and of making up quantities of suitable garments.

**Amount Contributed.**—The following statement shows the amount contributed to the various funds by the latter part of 1918:—

Funds, etc.	Sums received. £
1. Imperial Indian Relief Fund ..	829,875
2. St. John's Ambulance Association in cash .. .. .	91,000
St. John's Ambulance Association in kind .. .. .	127,000
3. Bombay War Relief Fund ..	318,000
4. Madras War Fund .. ..	288,000
5. United Provinces War Fund ..	200,000
6. Punjab Aeroplane Fund ..	100,000
7. Calcutta Motor Ambulance ..	45,000
8. Bhagalpur Motor Ambulance Fund .. .. .	17,800
9. Bengali Hospital Flat .. ..	8,700
10. Belgian Relief Fund .. ..	27,000
11. Gifts from Ruling Chiefs in cash ..	1,190,000
" " " in kind ..	200,000

The correctness of the foregoing figures, apart from the fact that in many cases they are round figures, is subject to the following qualifications:—

(i) The St. John's Ambulance Association receipts include contributions received from other funds, such as the Madras War Fund.

It is impossible on present information to separate these sums accurately from the receipts of the contributing funds.

(ii) The amount of the gifts in cash received from Ruling Chiefs has been compiled from a statement prepared in the Foreign and Political Department. All sums have been excluded which were contributed to one or other of the other Relief Funds as they have been included in the latter.

(iii) Gifts received from Ruling Chiefs in kind:—The figure of £200,000 is merely an estimate. It does not include anything on account of the multiplicity of miscellaneous services rendered by Chiefs the money value of which it is practically impossible to assess with any accuracy.

(iv) In addition to the above, gifts in cash and kind, to a very considerable amount, have been received by the numerous comforts funds established throughout India and in Burma. Complete figures of these contributions are not available, and if they were, they would be misleading, taken by themselves, as they would include contributions from other funds which are mainly of the nature of Collecting Funds.

(v) Finally, it may be pointed out that it is practically impossible to ascertain exactly the total amount of money contributed by India for purposes connected with the war. Money has been privately subscribed, in large amounts, it is believed, to certain Home War Funds, such as the Prince of Wales's Fund. It is only possible to give figures of contributions which have passed through some official channel, or have, for some special reasons, been reported to Government, such as, for example, gifts by Ruling Chiefs.

**Pensions.**—The balance of the money at the disposal of the Central Fund will be devoted eventually to the third, and ultimately the most important, object of the Fund, namely, the grant of assistance to the widows and orphans of those who are killed or die in service, to whom must logically be added the officers and soldiers incapacitated for further service. The amount which might be expended upon this object is almost unlimited, and the Committee in a recent communication to the Press state they have consequently endeavoured from the first to accumulate as large a sum as possible for expenditure at the end of the war, while affording such intermediate assistance as may be necessary. Some idea of the calls which may be anticipated upon the Fund at the close of the war may be gathered from the fact that even if the war had ended, by March 1916, the casualties continuing at the same rate as hitherto, it was estimated that of British officers of the Indian Army and of the Indian Army Reserve there will, by that time, have been 540 killed and 800 wounded; of Indian officers 800 killed and 750 wounded, and of Indian non-commissioned officers and men 9,000 killed and 25,000 wounded. It must, of course, be remembered that not more than 25 per cent. of the wounded in each class are likely to be so severely wounded as to be invalided out of the service. In the majority of cases the wounds will be relatively

alight, and the men will remain on the active list. Even allowing for this fact, however, there will probably be some 200 British officers, nearly as many Indian officers, and 6,000 Indian non-commissioned officers and men who are incapacitated by wounds for further service, many of whom will need assistance from the Fund. With the war lasting longer, or should the ratio of casualties become still higher, the number of claimants for assistance from the Fund will be much greater than at present anticipated. In addition to the classes mentioned above, there are also the widows and dependents of men serving on the Departmental Unattached Lists, of the Civilian European and Anglo-Indian staff belonging to the Military, Accounts, Postal and Telegraph Departments, and of Sub-Assistant Surgeons, all of whom may need help.

All the above-mentioned classes will, of course be eligible for pensions from the State; and the wound and injury pensions, as well as the family pensions, admissible to all ranks of the Indian Army and their families have recently been materially enhanced. Nevertheless it is impossible for any pensionary scheme, however liberally framed, to meet in full the varying degrees of need which will arise; and it is with the object of supplementing the efforts of Government in this direction that the Central Committee have under their consideration various schemes for the grant of assistance to all these classes at the close of the war. A rough estimate of the probable cost of these measures, based upon the optimistic hypothesis that the war might come to an end in the spring of 1916 and that the number of casualties will remain fairly constant showed that even then at least Rs. 85 lakhs would be required, if adequate relief is to be granted.

### St. John Ambulance Association.

H. E. the Viceroy, President of the Indian Council of the Association, announced on June 24, 1916, a change in the constitution of the Red Cross Department of this Association. He said: "The Indian Council of the St. John Ambulance Association has decided to affiliate itself to the Joint War Committee in England of St. John's and the Red Cross under the title of 'The Indian Branch of the Joint War Committee of the Order of St. John of Jerusalem and of the British Red Cross Society.' I feel sure that you will approve of this step which, while it leaves the civil side of the St. John Ambulance Association untouched, is calculated to promote efficiency as regards Red Cross work and to ensure prompt supplies of comforts to the sick and wounded, while it eliminates all possibilities of overlapping and friction. As an earnest of this agreement I may say the Joint War Committee in England have placed the sum of £30,000 to my credit for the furtherance of the work of the new Branch."

The new organisation took effect on the 2nd August, 1916, and future reports on the Red Cross work in India will issue under the direct auspices of that body. The Indian Branch of the St. John Ambulance Association

retains its present constitution as far as its civil or pre-war activities are concerned, its Red Cross work being affiliated to that of the separate Joint War Committee. Their Excellencies the Viceroy and Lady Chelmsford and the Commander-in-Chief are the President, Lady President and Vice-President, respectively, of the new organisation, with an **Executive Committee** composed as follows:—The Hon'ble Surg.-General Sir C. P. Lukie, K.C.S.I., K.H.S., V.D. *Chairman*, Major Hepper *Vice-Chairman*, Bombay, The Hon'ble Sir Francis Stewart, C.I.E., *Vice Chairman*, Calcutta, The Hon'ble Mr. Claude Hill, C.S.I., C.I.E., The Hon'ble Sir S. W. Gillan, K.C.S.I., The Hon'ble Mr. J. B. Wood, C.S.I., C.I.E., The Hon'ble Mr. A. H. Grant, C.S.I., C.I.E., The Hon'ble Mr. H. Sharp, C.S.I., C.I.E., Surg.-General T. J. O'Donnell, D.S.O., C.B., J. L. Maffey, Esq., C.I.E., C.S., Major L. Cotterill, R.A.M.C., H. R. Phelps, Esq., Colonel W. D. Henry, C.I.E., V.D. A.D.-C., Honorary Treasurer, Rev. J. Black, M.A., Honorary Secretary.

**Depot at Bombay.**—The fifth interim report, up to the end of June, 1916, of the Red Cross work of the St. John Ambulance in India states that since the War Gifts Depot in Bombay was opened in August, 1914, the quantity and variety of the garments and comforts and supplies generally that have passed through its doors have reached proportions which may well be described as phenomenal, and the stream of India's generosity is still in full flow over 11,500 units and 10,714 Red Cross Bags have been received and disposed of by the Depot during the period under review. The approximate value of the articles so received, up to the end of June, 1916, is Rs. 19,05,681, or £127,045 sterling.

The number of Frontier Hospitals, Depot Hospitals, and other War Hospitals in India has increased considerably, involving an ever increasing expenditure in grants of money or miscellaneous hospital supplies. This in the first instance comprised a standard scale of supplementary hospital equipment and comforts, valued approximately at Rs. 10 per bed, plus a cash grant for each bed of Rs. 5. The cash grants under this head have already reached a sum of Rs. 17,778-5-6, and the value of the other supplies is roughly estimated at Rs. 1,71,594. One indent alone, for the new hospitals at Secunderabad, Nasik, Drolai, and Poona was priced approximately at Rs. 50,000.

The War Fund has received generous support from the European and Indian public generally. Besides substantial donations from Princes and Nobles and other persons of wealth, the steady flow of subscriptions from officials of all grades has been a very gratifying feature of the Red Cross movement, while the help received from and through the leading and other ladies throughout the land must forever stand out as a remarkable testimony to our women, Indian and European. In addition to contributions in kind the War Fund has received Rs. 14,29,132-0-11 (over 295,000 sterling), of which it still had at the end of June a cash balance in hand of Rs. 4,09,885-2-0. His Highness Maharaja Scindia of Gwalior, who

is a Donat of the Order of St. John of Jerusalem in England, in addition to requesting that one-third of the total collection for the War in his State should be given to the St. John Ambulance War Fund, has himself given as many as five hundred original Indian and British Tea-Bed Units to the Indian Council, representing a cash value of Rs. 3,00,000, or £16,600 sterling, as well as a grant in money of Rs. 75,000. His Highness the Maharaja Holkar has made a handsome donation of Rs. 1,20,000 (£2,000 sterling), and the Sheikh of Koweit one of Rs. 50,000. The Bettiah State has also recently made a noble contribution to the War Fund of Rs. 1,00,000. Other very generous donations are:—The Raja Bahadur of Myseningsh, Rs. 60,000. Sir Rameshwar Singh, Maharaja Bahadur of Darbhanga, Rs. 57,500; Her Highness the Begum of Bhopal, Rs. 19,000. Her Excellency Lady Carmichael's Bengal Women's Fund (towards special purchases for certain hospitals) Rs. 10,000 and Raja Jyoti Prasad Singh Dev of Panchet Rs. 10,000.

The supply of Motor Ambulance and Cars for the sick and wounded as well as for officers and men approaching convalescence continues to be one of the principal items of expenditure. The demand upon the Army for Ambulances and Cars of various designs for above service has with the advance of time and expansion of Military operations, become increasingly pressing, and it is a source of much gratification to the Indian Council that they have been enabled by the great generosity of certain individuals and of the public generally to come to the aid of our brave soldiers in this matter in a very substantial way. The cost of the present pattern of Ambulance as approved by the Military authorities is approximately Rs. 10,000. In addition to the ordinary Ambulance fitted for lying-down cases, supplies have included Motor Buses of a special design for the rapid transport of less helpless cases between Ship, Train, and Hospitals and Motor Cars of a lighter build for use locally to take the men out for an occasional airing—a fruitful aid to speedy convalescence. A list of 81 conveyances thus supplied is given in the report. The above list represents a valuation of Rs. 5,25,000.

**Mesopotamia**—The special needs of Mesopotamia are the principal concern of the Association. An advanced Depot was opened at Basra in March, 1916, and the supplementary clothing and comforts thus supplied through the Association for sick and wounded in Mesopotamia, up to the 30th June, 1916, may be put at not less than four-and-a-half lakhs of rupees. Not only have the hospitals in Mesopotamia increased in number, but Convalescent Homes for officers have been opened at Amara and Basra, each to accommodate about 50 and a second one is about to be opened at the latter place which will accommodate as many as 100 officers. To the fitting up of these the Indian Council have contributed liberally and will continue to do so as required.

As regards the transport of sick and wounded, the Indian Council have supplied seven ordinary Motor Buses, two large Ambulance Flats, two Motor Launches, and a mobile laboratory on a large Motor Launch.

## Pay of the Indian Soldiers.

On January 1, 1917, important concessions to the Indian soldier were announced. In addition to receiving free rations (equivalent, in the case of a sepoy, to about Rs. 3-8 per month) Indian officers and non-commissioned officers are to benefit by largely increased pay. The advantages thus secured are shown below, where the former rates per month and the new rates are contrasted:

	Former pay.	Increased pay.
	Rs.	Rs.
Subadar-Major and Risaldar Major	150	190
Subadar, Risaldar and Ressaldar	100	120
Jamadar	50	60
Havildar and Dafadar	18	20
Nalk and Lance Dafadar	16	17

The increase in ordinary pensions is also very substantial. It has to be noted that formerly a sepoy or sowar could not retire on pension on the completion of 15 years' service unless he were invalided, when he received Rs. 3 per month, whereas in future he may retire in the ordinary way after 15 years on Rs. 5 per month. Under the old system, again, the sowar or sepoy received a pension of Rs. 4 per month on the completion of 18 years' service, while the new rate will be Rs. 6. The increases in the case of other ranks are shown below:

	Service Years.	Former rates. Rs.	New rates. Rs.
Lance-Dafadar and Nalk	18	5	7
Dafadar and Havildar	18	7	9
	21	9	11
Jamadar	20	16	24
	24	20	30
Risaldar-Major, Subadar-Major	21	39	40
	24	35	45
Risaldar, Ressaldar and Subadar.	28	40	55

The officers in the last category formerly had to serve 32 years to reach the maximum pension which was then Rs. 50 per month.

In addition to the above, there has been a pronounced enhancement in the special pensions granted to those who are not eligible for "ordinary" pensions, and who may be discharged on the recommendation of a medical board owing to physical or mental weakness due to causes beyond their own control.

## THE VICTORIA CROSS.

The announcement, made at the Delhi Durbar in 1911, that in future Indians would be eligible for the Victoria Cross gave satisfaction which was increased during the War by the award of that decoration to the following:—

Sepoy Khudadad, 129th Baluchis.—On 31st October 1914, at Hollebeke, Belgium, the British officer in charge of the detachment having been wounded, and the other gun put out of action by a shell, Sepoy Khudadad, though himself wounded remained working his gun until all the other five men of the gun detachment had been killed.

Naick Darwan Sing Negi, 1-39th Garhwal Rifles.—For great gallantry on the night of the 23rd-24th November 1914 near Festubert, France, when the Regiment was engaged in retaking and clearing the enemy out of our trenches, and, although wounded in two places in the head, and also in the arm, being one of the first to push round each successive traverse, in the face of severe fire from bombs and rifles at the closest range.

Jamadar Mir Dast, 55th Coke's Rifles.—For most conspicuous bravery and great ability at Ypres on 26th April 1915, when he led his platoon with great gallantry during the attack, and afterwards collected various parties of the Regiment (when no British Officers were left) and kept them under his command until the retiring movement was ordered. Jamadar Mir Dast subsequently on this day displayed remarkable courage in helping to carry eight British and Indian Officers into safety, whilst exposed to very heavy fire.

Rifleman Kulbir Thapa, 2-3rd Gurkha Rifles.—For most conspicuous bravery during operations against the German trenches south of Manquissart. When himself wounded, on the 25th September 1915, he found a badly wounded soldier of the 2nd Leicestershire Regiment behind the first line German trench, and though urged by the British soldier to save himself, he remained with him all day and night. In the early morning of the 26th September, in misty weather, he brought him out through the German wire, and, leaving him in a place of comparative safety returned and brought in two wounded Gurkhas one after the other. He then went back in broad daylight for the British soldier and brought him in also, carrying him most of the way and being at most points under the enemy's fire.

Lance-Naick Lala, 41st Dogras.—Finding a British Officer of another regiment lying close

to the enemy he dragged him into a temporary shelter, which he himself had made, and in which he had already bandaged four wounded men. After bandaging his wounds he heard calls from the Adjutant of his own Regiment who was lying in the open severely wounded. The enemy were not more than one hundred yards distant, and it seemed certain death to go out in that direction, but Lance-Naick Lala insisted on going out to his Adjutant, and offered to crawl back with him on his back at once. When this was not permitted, he stripped off his own clothing to keep the wounded officer warmer and stayed with him till just before dark, when he returned to the shelter. After dark he carried the first wounded officer back to the main trenches, and then, returning with a stretcher, carried back his Adjutant. He set a magnificent example of courage and devotion to his officers.

Sepoy Chatta Singh, 9th Bhopal Infantry.—For most conspicuous bravery and devotion to duty in leaving cover to assist his Commanding Officer who was lying wounded and helpless in the open. Sepoy Chatta Singh bound up the officer's wound and then dug cover for him with his entrenching tool, being exposed all the time to very heavy rifle fire. For five hours until nightfall he remained beside the wounded officer, slicking him with his own body on the exposed side. He then, under cover of darkness, went back for assistance, and brought the officer into safety.

Naick Shahamad Khan, Punjabis.—For most conspicuous bravery. He was in charge of a machine-gun section in an exposed position in front of and covering a gap in our new line within 150 yards of the enemy's entrenched position. He beat off three counter-attacks, and worked his gun single-handed after all his men, except two belt-fillers, had become casualties.

For three hours he held the gap under very heavy fire while it was being made secure. When his gun was knocked out by hostile fire he and his two belt-fillers held their ground with rifles till ordered to withdraw.

With three men sent to assist him he then brought back his gun, ammunition, and one severely wounded man unable to walk. Finally, he himself returned and removed all remaining arms and equipment except two shovels.

But for his great gallantry and determination our line must have been penetrated by the enemy.



## PASSPORT REGULATIONS.

The following regulations concerning passports were issued in 1915:—

1. Applications for Indian Passports must be made in the prescribed form, and submitted either direct or through the local authority—(a) in the case of a resident in British India, to the Local Government or Local Administration concerned; (b) in the case of a resident in a Native State, to the Agent to the Governor-General or Political Resident concerned.

2. The charge for an Indian Passport is Re. 1.

3. Indian Passports are granted to—(a) Natural-born British subjects; (b) wives and widows of such persons; (c) Persons naturalized in the United Kingdom, in the British Colonies or in India; and (d) Subjects of Native States in India. A married woman is deemed to be a subject of the State of which her husband is for the time being a subject.

4. Passports are granted upon the production of a declaration by the applicant in the prescribed form of application verified by a declaration made by a *Political Officer, Magistrate, Justice of the Peace, Police Officer, not below the rank of Superintendent or Notary Public, resident in India.*

5. If the applicant for a Passport be a Naturalized British subject, the certificate of naturalization must be forwarded with the form of application to the Officer empowered to grant the Passport. It will be returned with the Passport to the applicant through the person who may have verified the declaration. Naturalized British subjects will be described as such, in their Passports, which will be issued subject to the necessary qualifications.

6. Small duplicate unmounted photographs of the applicant (and wife, if to be included) must be forwarded with the application for a Passport, one of which must be certified on the back by the person verifying the declaration made in the application form.

7. Indian Passports are not available beyond two years from the date of issue. They may be renewed, *in India only*, for four further periods of two years each after which fresh Passports must be obtained. The fee for each renewal is Re. 1.

8. Passports cannot be issued or renewed on behalf of persons already abroad; such persons should be told to apply for Passports to the London Foreign Office or nearest British Mission or Consulate. Passports must not be sent out of India by post.

9. In the case of an applicant for a Passport being unable to write English a transcription in English should be placed below the applicant's vernacular signature in the form of application. In the case of an illiterate person, a thumb impression should be substituted for a signature on the form of application, which should be certified by the person verifying the declaration.

Travellers are hereby informed that *visas* and endorsements granted on passports by the Government of Bombay will, in future, be charged for as under:—

Fee for a *visa* on a foreign passport, Rs. 2.

Fee for an endorsement on a British passport, Re. 1.

## THE WAR LEAGUE.

The War League was formed in Karachi at a public meeting held at the Khalkdina Hall on 30th November, 1915. The following resolution which was moved by the Hon. Mr. M. de P. Webb, C.I.E., seconded by Mr. Jamshed N. R. Mehta and supported by several speakers, explains its aims:—This Meeting of the Citizens of Karachi is of opinion that it is desirable to create a War League with the following objects:—

(1) To organise and concentrate the efforts and resources of those who, though unable to proceed to the battle front, are nevertheless anxious to assist Government in every possible way in repelling the enemies of civilisation, and in restoring the Pax Britannica.

(2) To enlighten those who have not had opportunities of following closely the causes that have led up to the War, as to the true facts of the world-situation, the main incidents of the War itself, its cost in human life and material sacrifices, its inevitable course and end, and the desirability of helping actively to bring about the quickest possible downfall and extermination of the enemy invaders.

The Central Committee at present consists of the Hon. Sir Ibrahim Rahimtoola, C.I.E.,

Bombay; the Hon. Mian Mohamed Shafi, C.I.E. Lahore; the Hon. Mr. Ghulam M. Bhurgri, Hyderabad (Sind); the Hon. Sheikh Ghulam Hussain Hidayatullah, Hyderabad (Sind); the Hon. Mr. Harchandral Vishindass, Karachi; Messrs. Jehangir H. Kothari, E. L. Price and M. de P. Webb, C.I.E., Hon. Chief Secretary, Karachi.

Six Honorary Secretaries deal with the affairs of the League throughout India. The *War League Journal* is the official organ of the League. Several local Divisions (each with its own President, Committee and Secretary) have been formed throughout northern India. The Karachi Division has carried on an active campaign to popularise the sale of British five per cent. Exchequer Bonds, and several lakhs of rupees have been remitted through the League for this purpose. The total remittances from India through all sources for investment in War Loans and Exchequer Bonds are estimated to exceed two millions sterling to date. The League has well over a thousand members on its books including some of the most prominent officers of Government in India.

Office: 22, Staff Lines, Karachi.

# The Ministry.

The following shows the holders of the chief offices in the last Ministry and in the new Ministry so far as at present announced. The names of those constituting the Coalition Ministry when it came to an end are printed in Roman characters, and those of Ministers who left it or were transferred during its existence are given in italics. An asterisk is prefixed to the names of Ministers constituting the Cabinets:—

OFFICE.	COALITION MINISTRY.	NEW MINISTRY.
Prime Minister .. .. .	*MR. ASQUITH (L) .. .. .	*MR. LLOYD GEORGE.
First Lord of the Treasury	*LORD LANSDOWNE (U) .. .. .	*LORD MILNER.
Minister without portfolio	—	*MR. HENDERSON.
Minister without portfolio	*LORD BUCKMASTER (L) .. .. .	LORD FINLAY.
Lord Chancellor .. .. .	*LORD CREWE (L) .. .. .	*LORD CURZON.
Lord Pres. of the Council .. .. .	*LORD CURZON (U) .. .. .	LORD CRAWFORD.
Lord Privy Seal .. .. .	*MR. McKENNA (L) .. .. .	*MR. BONAR LAW.
Chancellor of the Exchequer	—	—
Secretaries of State:		
Home Affairs .. .. .	*Sir J. Simon (L) .. .. .	SIR GEORGE CAVE.
	*MR. H. SAMUEL (L) .. .. .	MR. BALFOUR.
Foreign Affairs .. .. .	*VISCOUNT GREY (L) .. .. .	MR. LONG.
Colonies .. .. .	*MR. BONAR LAW (U) .. .. .	—
	—	MR. CHAMBERLAIN
India .. .. .	*MR. CHAMBERLAIN (U) .. .. .	LORD DERBY.
War .. .. .	*Lord Kitchener .. .. .	—
	*MR. LLOYD GEORGE (L) .. .. .	—
Minister of Munitions .. .. .	*Mr. Lloyd George (L) .. .. .	DR. ADDISON.
	*MR. MONTAGU (L) .. .. .	MR. HODGE.
Minister of Labour .. .. .	—	MR. G. BARNES.
Pensions Minister .. .. .	—	LORD R. CECIL.
Minister of Blockade .. .. .	*LORD R. CECIL (U) .. .. .	—
	—	SIR E. CARSON.
First Lord of the Admiralty .. .. .	*MR. BALFOUR (U) .. .. .	LORD DEVONPORT.
Food Controller .. .. .	—	SIR J. P. MACLAY.
Shipping Controller .. .. .	—	SIR A. STANLEY.
President of the Board of Trade .. .. .	*MR. RUNCIMAN (L) .. .. .	—
President of the Local Government Board .. .. .	*MR. LONG (U) .. .. .	LORD RHONDDA.
Chancellor of the Duchy of Lancaster .. .. .	*Mr. Churchill (L) .. .. .	—
	*MR. McKINNON WOOD (L) .. .. .	SIR F. CAWLEY.
Chief Secretary for Ireland .. .. .	*Mr. Birrell (L) .. .. .	—
	*MR. H. E. DUKE (U) .. .. .	MR. DUKE.
Secretary for Scotland .. .. .	*Mr. McKinnon Wood (L) .. .. .	—
	*MR. TENNANT (L) .. .. .	MR. MUNRO.
President of the Board of Agriculture .. .. .	*Lord Selborne (U) .. .. .	—
	*LORD CRAWFORD (U) .. .. .	MR. R. E. PROTHERO.
First Commissioner of Works .. .. .	*MR. HARCOURT (L) .. .. .	SIR A. MOND.
President of the Board of Education .. .. .	—	—
	*Mr. Henderson (Lab) .. .. .	MR. H. A. L. FISHER.
Attorney-General .. .. .	*LORD CREWE (L) .. .. .	—
	*Sir E. Carson (U) .. .. .	SIR F. E. SMITH.
Postmaster-General .. .. .	SIR F. E. SMITH (U) .. .. .	—
	Mr. H. Samuel (L) .. .. .	MR. A. ILLINGWORTH.
Solicitor-General .. .. .	MR. J. A. FEASE (L) .. .. .	—
	Sir F. E. Smith (U) .. .. .	MR. GORDON HEWART.
	SIR G. CAVE (U) .. .. .	—
Parliamentary Under Secretaries—		
Home Affairs .. .. .	MR. W. BRACE (Lab) .. .. .	MR. BRACE.
Foreign Affairs .. .. .	Lord Robert Cecil (U) .. .. .	—
	LORD NEWTON (U) .. .. .	—
Colonies .. .. .	MR. STEEL-MAITLAND (U) .. .. .	MR. STEEL-MAITLAND.
India .. .. .	LORD ISLINGTON (L) .. .. .	LORD ISLINGTON.
	Mr. Tennant (L) .. .. .	—
War .. .. .	LORD DERBY (U) .. .. .	MR. J. I. MACPHERSON.

OFFICE.	COALITION MINISTRY.	NEW MINISTRY.
<b>Financial Secretaries;—</b>		
To the Treasury .. ..	Mr. Montagu (L) .. ..	MR. S. H. LEVER.
To the War Office .. ..	MR. MCKINNON WOOD (L) ..	MR. FORSTER.
To the Admiralty .. ..	MR. H. W. FORSTER (U) ..	DR. MACNAMARA.
Civil Lord of the Admiralty ..	DR. MACNAMARA (L) .. ..	
	The Duke of Devonshire (U) ..	MR. PRETYMAN.
	LORD LYTON (U) .. ..	
<b>Parliamentary Secretaries:—</b>		
Board of Trade .. ..	MR. PRETYMAN (U) .. ..	MR. G. H. ROBERTS.
Local Govt. Board .. ..	MR. HAYES FISHER (U) ..	MR. HAYES FISHER.
Board of Agriculture .. ..	MR. ACLAND (L) .. ..	SIR R. WINFREY.
Board of Education .. ..	MR. HERBERT LEWIS (L) ..	MR. HERBERT LEWIS.
Munitions .. ..	DR. ADDISON (L) .. ..	SIR L. WORTHINGTON EVANS and MR. KELLAWAY.
Food Control Dept. .. ..	—	CAPT. C. BATHURST.
Air Board .. ..	—	MAJOR BAIRD.
Paymaster-General .. ..	Lord Newton (U)	
Assistant Postmaster-General ..	MR. HENDERSON (Lab)	SIR J. COMPTON RICKETT.
	MR. PIKE PEASE (U) .. ..	MR. PIKE PEASE.
Parliamentary Secretary to the Treasury .. .. JOINT	{ MR. GULLAND (L) .. ..	LORD EDMUND TALBOT and the HON. NEIL PRIMROSE.
	{ LORD EDMUND TALBOT (U) ..	
Lords Commissioner of the Treasury:—		
	MR. G. H. ROBERTS (Lab) .	MR. J. F. HOPE.
	MR. HOWARD (L) .. ..	
	MR. BRIDGEMAN (U) .. ..	
	MR. WALTER REA (unpaid) (L)	MR. PRATT.

### SCOTLAND.

Lord Advocate .. ..	MR. MUNBO (L) .. ..	MR. J. A. CLYDE.
Solicitor-General .. ..	MR. MORISON (L) .. ..	MR. MORISON.

### IRELAND.

Lord Lieutenant .. ..	LORD WIMBORNE (L) .. ..	LORD WIMBORNE.
Lord Chancellor .. ..	SIR I. J. O'BRIEN (L) .. ..	SIR I. J. O'BRIEN.
Attorney-General .. ..	MR. JOHN GORDON (U) ..	
Solicitor-General .. ..	MR. J. O'CONNOR (L) .. ..	
Vice-Pres. of Depar. of Agriculture	MR. T. W. RUSSELL (L) ..	

### HOUSEHOLD APPOINTMENTS.

Lord Steward .. ..	LORD FARQUHAR (U) .. ..	LORD FARQUHAR.
Treasurer of the Household ..	MR. JAMES HOPE (U) .. ..	COL. JAMES CRAIG.
Comptroller of the Household ..	MR. CHARLES ROBERT (L) ..	SIR EDWIN CORNWALL.
	(And Chairman National Health Insurance Joint Committee) .. ..	
Lord Chamberlain .. ..	LORD SANDHURST (L) .. ..	LORD SANDHURST.
Vice-Chamberlain of the Household	MR. A. C. BECK (L) .. ..	MR. BECK.
Lords-in-Waiting:—		
	LORD HERSCHELL (L) .. ..	LORD HERSCHELL.
	LORD ALLENDALE (L) .. ..	LORD KENYON.
	LORD STANMORE (L) .. ..	LORD STANMORE.
	LORD RANKSBOROUGH .. ..	LORD RANKSBOROUGH.
	LORD VALENTIA (U) .. ..	LORD VALENTIA.
	LORD HYLTON (U) .. ..	LORD HYLTON.
	LORD COLEBROOK (L) .. ..	LORD COLEBROOKE.
Captain of the Gentlemen-at Arms.		
Captain of the Yeomen of the Guard .. ..	LORD SUFFIELD (U) .. ..	LORD SUFFIELD.
Master of the Horse .. ..	LORD CHESTERFIELD (L) ..	LORD CHESTERFIELD.

# Racing.

## Calcutta.

The Governor's Cup. Distance 1½ miles.—	
General Nawabzada Obaidulla Khan's Kiltol (9st. 12lbs.), Bowley ..	1
Mr. Lauder's Second Edition (8st. 11lb.), Stokes ..	2
H. H. the Maharaja of Gwalior's Manilla (7st. 7lbs., carried 7st. 11lbs.), A Hoyt ..	3
Mr. Bartlett's Santa Barbara (7st. 2lbs.), Japheth ..	4
Indian Grand National. Distance 3 miles.—	
Mr. Goculdass' First Venture (9st. 2lbs., carried 9st. 3lbs.), Northmore ..	1
Mr. Curtis Hayward's Pilot (9st. 3lbs.), Williamson ..	2
Mr. J. D. Scott's Sea Lad (9st. 9lbs.), Barker ..	3
Mr. Goculdass' Solution (11st. 2lbs.), A. Hoyt ..	4
Prince of Wales Plate. Distance 1 mile —	
Mr. Thaddeus' Evett (9st.), E. Huxley ..	1
Mr. Hartigan's Martinet (7st. 5lbs., carried 7st. 6lbs.), Billett ..	2
Maharaja of Gwalior's Vili (6st., carried 6st. 10lbs.), Japheth ..	3
Mr. Heath's Orloff (8st. 11lb.), Bowley ..	4
Macpherson Cup. Distance 8t Lager course.—	
Mr. Goculdass' Matchlock (8st. 7lbs.), Whalley ..	1
Mr. Goculdass' Knights Key (8st. 8lbs.), W. Huxley ..	2
H. H. General Nawabzada Obaidulla Khan's Spencer (7st. 6lbs., carried 7st. 9lbs.), Wing ..	3
Mr. R. R. S.'s Silver Balm (9st. 2lbs.), F. Templeman ..	4
The Metropolitan. Distance 6 furlongs.—	
Mr. Lauder's Symrex (7st 10lbs.), Stokes ..	1
Mr. R. R. S.'s Criton (8st. 7lbs.), Templeman ..	2
Mr. Thaddeus' Pastime (7st. 11lbs.), Wing ..	3
Mr. Ainsworth's Vanity Box (8st. 5lbs) ..	4
Merchants' Plate. Distance 1½ miles.—	
Mr. Lauder's Second Edition (8st. 13lbs.), Stokes ..	1
Mr. Goculdass' Matchlock (9st. 2lbs.), W. Huxley ..	2
General Nawabzada Obaidulla Khan's Spencer (8st. 11lb.), Bowley ..	3
Mr. Thaddeus' Freddie (6st. 7lbs., carried 7st.), Thompson ..	4
The Governor's Cup. Distance 1½ miles.—	
Mr. M. Goculdass' Matchlock (8st. 7lbs.), W. Huxley ..	1
Mr. Wilton Bartlett's Santa Barbara (7st 10lbs.), Lynch ..	2
Mr. M. Goculdass' Royal Ambition (8st. 11lb.), Flynn ..	4
Mr. W. Saunders' Second Edition (7st. 11lbs., carried 7st 13lbs.), Wing ..	4

## Barrackpore.

Pony Derby. Distance 1 mile.—	
Mr. Powell's Go On (11st. 7lbs.), Mr. Gullford ..	1
Mr. Dass' Post Entry (9st. 2lbs.), Chowthi ..	2
Mr. Galstaun's Roseleaf (11st. 11lb.), Lansdown ..	3
Stewards' Cup. Distance 5 furlongs.—	
Mr. D. Hunter's McKinney (9st.), Menellage ..	1
Mr. Glastaun's Castle Vite (10st. 12lbs.), Gullford ..	2
Mr. C. Lyddon's Tallawah (8st. 11lbs.), Nand Lal ..	3

## Bombay.

The Byculla Club Cup. Distance 1½ miles.—	
Mr. R. R. S.'s Magyar (9st. 4lbs.), F. Templeman ..	1
General Nawabzada Obaidulla Khan's Kiltol (10st. 4lbs.), Bowley ..	2
Mr. Wilton Bartlett's St. Andrews (8st. 4lbs.), Trenoweth ..	3
Mr. M. Goculdass' Matchlock (8st. 9lbs.), W. Huxley ..	4
The Grand Western Handicap. Distance about 1 mile 1 furlong —	
Mr. Kelso's Vanadium (8st. 9lbs.), Trenoweth ..	1
Mr. R. R. S.'s Bandit (7st. 10lbs.), Pullin ..	2
Mr. J. Mervin's Dersingham (9st.), HJH ..	3
Mr. R. R. S.'s Silver Balm (9st. 12lbs.), F. Templeman ..	4
The Turf Club Cup. Distance 1½ miles.—	
General Nawabzada Obaidulla Khan's Purity (8st. 8lbs.), Hardy ..	1
General Nawabzada Obaidulla Khan's Singer (9st. 7lbs.), Bowley ..	2
Mr. Ali bin Talib's Black Malik (7st.), Mujeed ..	3
Mr. R. R. S.'s Majbur (9st. 8lbs.), F. Templeman ..	4
The Malabar Hill Plate. Distance 6 furlongs.—	
Mr. R. R. S.'s Patrick (8st. 9lbs.), F. Templeman ..	1
Mr. T. M. Thaddeus' Evett (9st. 3lbs.), Firth ..	2
Mr. J. Mervin's Dersingham (9st. 3lbs.), Mitchell ..	3
Mr. M. Goculdass' Polish (9st. 8lbs.), Whalley ..	4
The Bombay City Plate. Distance about 1½ miles (1¼ miles scale).—	
Mr. R. R. S.'s Magyar (8st. 11lbs.), Pullin ..	1
Mr. R. R. S.'s Silver Balm (9st. 8lbs.), F. Templeman ..	2
General Nawabzada Obaidulla Khan's Kiltol (9st. 10lbs.), Bowley ..	3
Mr. J. Mervin's Dersingham (9st. 3lbs.), Mitchell ..	4
The Willingdon Plate. Distance about 7 furlongs.—	
Mr. T. M. Thaddeus' Pastime (8st. 4lbs.), Firth ..	1
Mr. R. R. S.'s Criton (8st. 4lbs.), Pullin ..	2
General Nawabzada Obaidulla Khan's Lady Muriel (6st. 6lbs.), Pursoosingh ..	3

Mr. J. L. Ainsworth's Ute (8st.), Japheth.. 4  
**The Bombay Derby.** Distance 1½ miles.—  
 Messrs. M. Goculdass and P. Mathradass'  
 Sparrow Hawk (9st. 5lbs.), W. Huxley.. 1  
 Mr. R. R. S.'s Majbur (9st. 2lbs.), F. Templeman .. 2  
 Mr. Dara Cowasjee's Terror (8st. 5lbs.), F. Hardy .. 3  
 General Nawabzada Obaidulla Khan's Singer (9st. 7lbs.), Bowley .. 4  
**The Mansfield Plate.** Distance 6 furlongs.—  
 Mr. R. R. S.'s Bandit (8st. 9lbs.), F. Templeman .. 1  
 Mr. Heath's Roseville (8st. 5lbs.), Bowley.. 2  
 Mr. J. L. Ainsworth's Carpentia (7st.), Harrison .. 3  
 Mr. J. L. Ainsworth's Vanity Box (7st. 13lbs.), Buckley .. 4  
**The Flying Plate.** Distance 5 furlongs.—  
 Mr. R. R. S.'s Patrick (9st. 12lbs.), F. Templeman .. 1  
 Captain J. J. Hilliard's Lakme (8st. 11b), Trenoweth .. 2  
 Mr. M. Goculdass' Forward III (9st. 2lbs.), Barrett .. 3  
 General Nawabzada Obaidulla Khan's Motor Wrap (8st.), Harrison .. 4  
**The Second Dealers' Plate.** Distance about 1 mile.—  
 General Nawabzada Obaidulla Khan's Aurora (8st. 4lbs.), Purtoosingh.. 1  
 Messrs. A. Nanjee and Valljee Moosajee's Gazal (8st. 8lbs.), Barrett .. 2  
 Mr. R. R. S.'s Angler (7st. 5lbs.), Pullin .. 3  
**The Tom Le Mesurier Plate.** Distance about 7 furlongs.—  
 Mr. R. R. S.'s Thank you (9st. 11b), F. Templeman .. 1  
 Mr. R. H. Gahagan's Wellington (9st. 2lbs.), A. Templeman .. 2  
 General Nawabzada Obaidulla Khan's Polish (8st. 6lbs.), Bowley .. 3  
 General Nawabzada Obaidulla Khan's Ruby Fish (7st. 4lbs.), Purtoosingh .. 4  
**The Melton Plate.** Distance 6 furlongs.—  
 Messrs. M. Goculdass and P. Mathradass' Crusader (8st. 10lbs.), F. Hardy .. 1  
 General Nawabzada Obaidulla Khan's Aurora (9st.), Bowley .. 2  
 Messrs. A. Nanjee and Valljee Moosajee's Gazal (9st.), Barrett .. 3  
 Mr. Cecil's Planet (9st.), Zamil .. 4  
**The Gaye Plate.** Distance about 1½ miles.—  
 Messrs. M. Goculdass and P. Mathradass' Sparrow Hawk (9st. 12lbs.), W. Huxley.. 1  
 Mr. Heath's Ajax (8st. 8lbs., carried 6st. 11lbs.), Japheth .. 2  
 General Nawabzada Obaidulla Khan's Purity (8st. 12lbs.), Bowley .. 3  
 Mr. Dara Cowasjee's Terror (8st. 6lbs.), Hardy .. 4  
**The Gough Memorial Plate.** Distance 6 furlongs.—  
 Mr. N. Jehangir's Saidan (8st. 4lbs.), Trenoweth .. 1

Mr. A. J. De Souza's Maasal (8st.) Barret.. 2  
 General Nawabzada Obaidulla Khan's Polish (8st. 11b.), Bowley .. 3  
 Mr. T. Harrison's Mat-hat-Baig (6st. 8lbs.), Harrison .. 4  
**King Emperor's Cup.** Distance 1 mile.—  
 Mr. R. R. S.'s Silver Balm (9st. 3 lbs.) F. Templeman .. 1  
 Mr. M. Goculdass' Salandra (8st. 7lbs.) W. Huxley .. 2  
 Raikut of Balkanthpur's Bydand (9st. 8lbs., Buckley .. 3  
 Mr. Thadden's Evett (9st. 8 1/2 lbs.) Ruiz .. 4  
**Durdwan Cup.** R. C. and distance.—  
 Mr. Goculdass' Politian (10st. 13lbs.) Northmore .. 1  
 Mr. A. Coningham's Blackmailer (9st. 10lbs.) Clark.. 2  
 Mr. Kelso's Screamer (9st. 10lbs.) Scott .. 3  
**The Viceroy's Cup.** Distance 1½ miles.—A.  
 Mr. R. R. S.'s Bachelor's Wedding (9st. 3lbs.) Ruiz .. 1  
 Mr. R. R. S.'s Magyar (9st. 3lbs.) F. Templeman .. 2  
 Mr. Wadia's Pizama (8st. 11 lbs.) Barrett.. 3  
 Raikut of Balkanthpore's Bydand (9st.) Buckley .. 4  
**International Pony Plate.** Distance 7 furlongs.—  
 Mr. Goculdass Gipsy's Advice (9st. 13lbs.) W. Huxley .. 1  
 Mrs. John Peter's Royal Sally (8st. 8lbs., carried 8st. 9lbs.) F. Templeman .. 2  
 Mr. Butler's Nareb (9st. 10lbs.) Firth .. 3

### Poona.

**The Western India Stakes.** Distance 1½ miles.—  
 Messrs. Heath and Arthur's Jove (8st. 8lbs.), J. Trenoweth .. 1  
 Mr. M. Goculdass' Sunfire (9st. 8lbs.) W. Huxley .. 2  
 Mr. Pitt's Triple Alliance (6st. 2 lbs., carried 6st. 11lbs.), Lynch .. 3  
 Mr. Heath's Silver Thrush (8st. 4lbs.), F. Hardy .. 4  
**The Trial Plate.** Distance 1 mile.—  
 Mr. R. R. S.'s Silver Balm (8st. 10lbs.), Ruiz. 1  
 General Nawabzada Obaidulla Khan's Kiltol (9st. 3lbs.), Bowley .. 2  
 Messrs. Heath and Gold's Joyous Gard (7st. 6lbs.), Purtoosingh .. 3  
 Messrs. Heath and Arthur's Jove (7st. 9lbs.), Harrison .. 4  
**The Aga Khan's Cup.** Distance 1½ miles.—  
 General Nawabzada Obaidulla Khan's Kiltol (9st. 3lbs.), Bowley .. 1  
 Mr. J. Mervent's Dersingham (8st. 5lbs.), Buckley .. 2  
 Mr. R. R. S.'s Silver Balm (9st. 3lbs.) F. Templeman .. 3  
 Mr. M. Goculdass' Sunfire (8st. 13lbs.) W. Huxley .. 4

**The Governor's Cup. R. C. and Distance.—**

Mr. A. A. Mahomed's Beirut (8st. 6lbs.), J. Ruiz	1
Mr. R. B. S.'s Kayid (8st. 6lbs.), F. Hardy	2
Messrs. M. Goculdass and P. Mathuradass' Ruby Mine (7st. 8lbs.), Lynch	3
General Nawabzada Obaidulla Khan's Gold Fish II (8st. 2lbs.), Bowley	4

**The Turf Club Cup. Distance 1½ miles.—**

Mr. R. H. Gahagan's Section (8st. 12lbs.), Lynch	1
Mr. Ali bin Talib's Maazool (late Black Malik) (7st. 7lbs.), Mujeed	2
Mr. Heath's Makbul (7st. 7lbs.), Ringstad	3
Mr. R. R. S.'s Longboat (8st. 6lbs.), Pullin	4

**Poona Derby. Distance 1½ miles.—**

Mr. R. B. S.'s Longboat (8st. 3lbs.), Hardy	1
Messrs. Goculdass and Mathuradass' Royal Court (8st. 9lbs.), Purtoosingh	2
Mr. Ali bin Talib's Black Malik (8st. 3lbs.), Ruiz	3
Mr. S. A. Wahed's Black Hussar (8st. 9lbs.), Buckley	4

**St. Leger Plate. Distance R. C. and a distance.—**

Messrs. Heath and Arthur's Jove (8st. 4lbs.), F. Hardy	1
Mr. Wilton Bartleet's Santa Barbara (6st. 7lbs., carried 6st. 11lbs.), Lynch	2
Mr. R. R. S.'s Magyar (9st. 6lbs.), F. Templeman	3
Mr. Goculdass' Matchlock (7st. 7lbs., Purtoosingh	4

**The Poona Plate. Distance about 5 furlongs.—**

Mr. M. Goculdass' Verge (6st. 13lbs.), Collis	1
Mr. R. B. S.'s Patrick (9st. 3lbs.), F. Templeman	2
Captain J. J. Hilliard's Lakme (8st. 11lb., carried 8st. 2lbs.) J. Ruiz	3
Mr. M. Goculdass' Primrose Morn (7st. 10lbs.), Bowley	4

**H. H. the first Aga Khan's Commemoration Plate. Distance 1½ miles.—**

General Nawabzada Obaidulla Khan's Gold Fish II (8st. 7lbs.), Bowley	1
Mr. R. B. S.'s Longboat (8st. 7lbs.), Pullin	2
Mr. R. B. S.'s Majbur (9st. 11lb.), F. Templeman	3
Mr. Ali bin Talib's Black Malik (8st. 3lbs.), J. Ruiz	4

**The Aga Shamshudin Plate. Distance 7 furlongs.—**

Mr. M. Goculdass' Primrose Morn (8st. 5lbs.), W. Huxley	1
Messrs. E. C. Ramshaw and A. Nanjee's Pantomime II (8st.), Bowley	2
Mr. D. Pallonjee's Radiant (9st. 6lbs.), Barrett	3
Mr. R. B. S.'s Oriton (8st. 2lbs.), Pullin	4

**The Stand Plate. Distance 1 mile.—**

Mr. R. B. S.'s Silver Balm (8st. 12lbs.), F. Templeman	1
Mr. Heath's Silver Thrush (8st. 7lbs.), Hardy	2
Mr. Wilton Bartleet's St. Andrews (8st. 9lbs.), W. Huxley	3
Mr. J. L. Ainsworth's Vanity Box (7st. 8lbs.), Lynch	4

**Arab Champion Plate. Distance R. C. and distance.—**

Mr. R. B. S.'s Kayid (8st. 12lbs.), Pullin	1
Mr. R. B. S.'s Majbur (9st. 3lbs.), F. Templeman	2
General Nawabzada Obaidulla Khan's Singer (8st. 13lbs.), Bowley	3
General Nawabzada Obaidulla Khan's Purity (9st. 3lbs.), Collis	4

**Ganeshkhind Plate. Distance 6 furlongs.—**

Mr. M. Goculdass' Primrose Morn (7st. 13lbs.), Purtoosingh	1
Mr. M. Goculdass' Polish (8st. 12lbs.), W. Huxley	2
Messrs. A. Nanjee and Ramshaw's Pantomime II (8st. 4lbs.), Bowley	3
Capt. J. Hilliard's Lakme (8st. 5lbs.), Barrett	4

**Arab Pony Derby. Distance 6 furlongs.—**

Mr. R. B. S.'s Zaki Pasha (9st. 2lbs.), F. Templeman	1
Mr. Ali bin Talib's Tammooz (8st. 12lbs.), Barrett	2
Mr. Shaik Esmail's Advance (8st. 4lbs.), Purtoosingh	3
Aga Mirza Ahmed and Mr. A. W. Essa's Bahlool (9st. 2lbs.), Buckley	4

**The Dealers' New Plate. Distance 1½ miles.—**

Mr. S. A. Wahed's Pacemaker (7st. 13lbs.), Buckley	1
General Nawabzada Obaidulla Khan's Aurora (9st. 10lbs.), Bowley	2
Messrs. A. Nanji and V. Moosajji's Gazal (8st. 10lbs.), Barrett	3
Mr. Cecil's Planet (8st. 10lbs.), Trahan	4

**Cecil Gray Plate. Distance 6 furlongs.—**

Messrs. A. Nanjee and V. Moosajji's Gazal (8st. 11lbs.), F. Templeman	1
Mr. P. Stewart's Fairy Gold (8st. 7lbs.), Barrett	2
Mr. Cecil's Planet (9st.), J. Trenoweth	3
Mr. R. B. S.'s Angler (7st. 13lbs.), Pullin	4

**Meerut.**

**Governor-General's Cup. Distance 1½ miles.—**

Mr. Hajee Oosman Salt's Aubrey (9st. 3lbs.), Shumudin	1
H. H. Maharajah of Patiala's Dick Turpin (9st. 8lbs.), Quinn	2
Sirdar Jewan Singh's Major-General (9st. 8lbs.), Northmore	3

**Thakore Sripal Singh's Hard Cash (9st. 8lbs.), Firth .. .. 4****Royal Calcutta Turf Club Plate. Distance 1 mile.—**

M. A. Watson's Silver Memory, (8st. 3lbs.),  
carried 8st. 4lbs.). Trahan .. .. 1

Sirdar Jewan Singh's Menes, (9st. 7lbs.),  
Ruiz .. .. 2

Thakore Sripal Singh's Falcum, (8st. 3lbs.),  
Mosundin .. .. 3

Captain Weinhold's Pat's Pet (7st. carried  
(8st.), Japheth .. .. 4

**Meerut Silver Vase. Distance 6 furlongs.—**

Mr. R. Skinner's Mubrook }  
(8st. 13lbs.), Trahan } Dead heat.

Captain Weatherall's Naj-  
mi (8st. 6lbs.), Vick }

Sirdar Jiwan Singh's The Winner, (10st.  
10lbs.), Ruiz .. .. 3

Thakore Sripal Singh's Thabashir, (8st.  
6lbs.), Buckley .. .. 4

**Jodhpur Cup. Distance 1½ miles.—**

Mr. V. Holland's Pat Malone (9st. 6lbs.),  
Ruiz .. .. 1

Major A. Watson's Silver Memory (10st.  
3lbs.), Trahan .. .. 2

Captain Wanholt's Pat's Pet (8st. 2 lbs.,  
carried 8st. 3lbs.), Quinn .. .. 3

Captain Body's Monsoon (10st. 5lbs.),  
Captain Bernard .. .. 4

**Rawalpindi.****Punjab Army Cup Chase. Distance 3 miles —**

Captain H. M. Wilson's Harmony (11st.  
10lbs.), Owner .. .. 1

Brigadier-General Baldwin's Lachen (11st.  
10lbs.), Owner .. .. 2

Captain S. Tucker's Gallobunt (10st. 3lbs.),  
Hallowes .. .. 3

**Rangoon.****Rangoon Derby.—**

Mr. Ma Saw's Kaung Kyee (late Sein Aung). 1

Mr. Maung Tha Gywe's Mya Sin .. .. 2

Mr. Maung Kan Yah's Karka .. .. 3

**Lahore.****Lahore Cesarewitch. Distance 2 miles.—**

Captain Weldon and Cairne's Larko Lodge  
(7st. 5lbs.), Abdul Wahid .. .. 1

Mr. A. Watson's Silver Memory (8st. 12lbs.,  
carried 9st. 2lbs.), Trahan .. .. 2

Major Teed's Pat's Pet (8st. 2lbs. carried  
9st. 6lbs.), Melsom .. .. 3

**Lahore St. Ledger. Distance 1½ mile.—**

Mr Ahmad Khan's Badial (9st. carried  
9st. 4lbs.), Quinn .. .. 1

Captain D. W. Bruce's Floradora (9st.  
12lbs.), Captain Byrne .. .. 2

Captain D. Vanrenen's Gadwell (9st. 12lbs.  
carried 10st. 2lbs.), Trahan .. .. 3

**Lucknow.****Civil Service Cup. Distance 6 furlongs.—**

Mr. Goculdass' Symptoms (9st. 13lbs.),  
Whalley .. .. 1

Mr. Walin's Lady Bunny (8st. 8lbs.),  
W. Southall .. .. 2

His Highness the Maharaja of Patiala's  
Dick Turpin (8st. 7lbs.), Quinn .. .. 3

His Highness the Maharaja of Patiala's  
Little Wonder (6st. 9lbs., carried 6st.  
11lbs.), Japheth .. .. 4

**Lucknow Derby. Distance 1½ mile.—**

Mr. Yunis Sait's Glendook (8st. 2lbs.),  
Stokes .. .. 1

His Highness the Maharaja of Patiala's  
Mil (9st.), Quinn .. .. 2

Sirdar Jewan Singh's Menes }  
(8st. 11lbs.), W. Huxley } Dead heat.

Mr Galstaun's Molgibby (8st  
3lbs.) .. .. }

**Stewards' Cup. Distance 1 mile.—**

Sirdar Jewan Singh Menes (8st. 10lbs.),  
W. Huxley .. .. 1

Mr. M. Yunus' Glendook (8st. 2lbs.), Stokes. 2

Mr. J. C. Galstaun's Molgibby (8st. 4lbs.),  
Wing .. .. 3

Col. Muscenden's Dancing Mistress (8st.  
3lbs., carried 8st. 5lbs.), Trahoar .. .. 4

**Great Oudh Handicap. Distance 6 furlongs.—**

Sirdar Jewan Singh's Ilyrim (9st. 9lbs.),  
W. Huxley .. .. 1

Sirdar Jewan Singh's The Winner (10st.  
3lbs.), Mr. Holland .. .. 2

Kour Saruan Singh's Alibaba (8st. 3lbs.,  
carried 8st. 5lbs.), Trahan .. .. 3

Mr Roscoe's Rupert (11st. 7lbs.), Whalley .. 4

**Secunderabad.****Secunderabad Cup. Distance 1½ miles.—**

Mr. J. Crawford's Monsoon (9st. 7 lbs.),  
Southall .. .. 1

Mr. Tarrant's Witham (9st. 5 lbs.), Pratt .. 2

Major A. I. Walker's Prince Merv (8st.),  
Melsom .. .. 3

**Military Purse. Distance R. C.—**

Mr T. Manak's Iron Chest (12 st.), Mr.  
Branfoot .. .. 1

Major Khusru Jung's Ameer Aswad (10 st.  
9 lbs.), Owner .. .. 2

Mr. M. Nazir Beg's Nazeer (10st.), Mr.  
Green .. .. 3

**Gough Memorial Plate. Distance 6 furlongs.—**

Colonel Desaraj Urs' Good Hope (10 st.),  
Melsom .. .. 1

Mr. D. C. Branfoot's Lulu (9 st. 3 lbs.),  
Southall .. .. 2

Dr. Ahmed Mirza's May Moru (10 st.),  
Afzar Yar Jung .. .. 3

**Gwallior.***Spring.*

Scindia Cup. Distance 5 furlongs.—

- Mr. M. Goculdas' Symptoms (10st.), W. Huxley .. .. . 1  
 H. H. General Nawabzada Obaidulla Khan's Arlington (9st. 13lbs.), Harrison .. .. 2  
 Mr. Galstaun's Pier (8st. 7lbs.), Wing .. 3  
 Kour Surnam Singh's Maori King (7st. 7lbs., carried 7st. 8lbs.), J. Southhall .. 4

Gwallior Derby. Distance 1½ miles.—

- H. H. Maharajah Scindia's Vidi (10st.), W. Huxley .. .. . 1  
 Mr. V. Holland's Pat Malone (7st. 12lbs.), Harrison .. .. . 2  
 Mr. Galstaun's Moigibby (8st. 8lbs.), Wing .. 3

Grand Pony Handicap. Distance 7 furlongs.—

- Sirdar Sant Singh Chachi's Lady Larygen, (9st. 8lbs.), T. Bhahan .. .. . 1  
 Khan Bahadur Mohamed Israr Hooasan and H. H. Genl. Nawabzada Obaidulla Khan's Imperialist (10st. 2lbs.), Harrison .. .. . 2  
 Captain S. Robinson's Given (8st. 12lbs.), Crowden .. .. . 3

Points Cup. Distance 6 furlongs.—

- His Highness General Nawabzada Obaidulla Khan's Arlington (9st. 11lbs.), Bowley .. 1  
 His Highness the Maharajah of Patiala's Grey Light (8st. 11lbs.), Mason .. .. 2  
 Captain Weatherall's Lady Lyric (7st. 2lbs., carried 7st. 5lbs.) .. .. . } Dead heat.  
 His Highness the Maharajah Patiala's Little Wonder (8st. 12lbs.), Japeth. }

*Autumn.*

Scindia Cup. Distance 7 furlongs.—

- Messrs. F. Garda and M. Goculdas' Lamination (7st. 10 lbs.), Purtoosingh .. 1  
 H. H. Maharaja of Gwallior's Vidi (8st. 8lbs.), A. Templeman .. .. . 2  
 Mr. J. Galstaun's Orepesa (8st. 12lbs.), Ruiz. 3  
 H. H. Maharaja of Gwallior's Twa Briggs (9st.), Trahan .. .. . 4

Western India Turf Club Plate. Distance 6 furlongs.—

- Mr. F. Garda's Nizam-ul Mulk (8st. 12lbs.), Trahan .. .. . 1  
 Mr. Holland's Bahlool (9st. 4lbs.), Owner .. 2  
 General Nawabzada Obaidulla Khan's Mohsci (8st. 7lbs.), Collis .. .. . 3  
 Messrs. Bishan Narain and Goverdhan Pershad's Selim (6st., carried 7st. 1lb.), A. Wahid .. .. . 4

Bhopal Cup. Distance 5 furlongs.—

- Mr. Y. Ariff's Vallant (9st. 8lbs.), Trahan .. 1  
 Messrs. E. Ramahaw's and Y. Stewart's Kestrel II. (7st. 8lbs.), Harrison .. .. 2  
 Mr. R. R. S.'s Block Freight (8st 1lb.), Purtoosingh .. .. . 3  
 H. H. General Nawabzada Obaidulla Khan's Indian Apple (7st 2lbs.), Coths .. .. 4

Central India Plate. Distance 1½ miles.—

- H. H. General Nawabzada Obaidulla Khan's St. Adams (9st. 12lbs., carried 7st. 1lb.), Collis .. .. . 1  
 H. H. the Maharaja of Gwallior's Philanthropist (9st. 5lbs.), Trahan .. .. . 2  
 Mr. Goculdas' Pretty Good Sort (9st. 2lbs.), Purtoosingh .. .. . 3

**LAWN TENNIS.****Simla.**

Open Championships.—

- Men's Singles—Green beat Major Knowles.  
 Mixed Doubles—Mrs. Gracey and Deane beat Mrs. Stead and Lamsden.  
 Men's Doubles—Maharaja Singh and Green beat Major Knowles and Martin.  
 Ladies' Singles—Miss Bowder beat Mrs. Gracey.

Anandale Gymkhana Tournament.—

Men's Doubles.—Maharaj Singh and Green.

Mixed Doubles.— Mr. and Mrs. Heathcote.

**Bengal.**

Calcutta Tournament.—

- Men's Singles—Shemedzu.  
 Mixed Doubles—E. M. Atkinson and Mrs. Leslie Jones.

Ladies' Singles—Mrs. Marshall.

Men's Doubles—Atkinson and Deane.

**Bombay.**

Western India Tournament.—

- Men's Singles—Ranga Rao.  
 Men's Doubles—Chinmulgand and Fyze.  
 Mixed Doubles—Mr. and Mrs. England.

G. I. P. Railway Tournament.—

- Men's Singles—Mr. F. Langdon of Nagpur.  
 Men's Doubles—Messrs. Henderson and Brown of Igatpuri.  
 Mixed Doubles.—Mrs. T. W. Bonner and Mr. A. E. Williams of Parli.

Conder Tournament.—

V. V. Bhadkankar and R. A. Wagle



## Delhi.

### Annual Tournament.—

Men's Singles—R. Powell.

Men's Doubles—Kunwar Maharaj Singh and C. M. Coates.

Mixed Doubles—Captain and Mrs. Condon.

### Delhi Club Tournament.—

Ladies' Handicap Singles—Mrs. V. Beadon.

Ladies' Handicap Doubles—Mrs. Chitty and Miss Boyd.

Men's Open Singles—Mr. R. Powell.

Men's Handicap Doubles—Major Bunbury and Mr. Moncrieff Smith.

Mixed Handicap Doubles—Miss P. Currie and Major Bunbury.

## Punjab.

### Lahore Tournament.—

Ladies' Singles—Miss Bowdler.

Men's Singles—Atkinson.

Mixed Doubles—Ritchie and Miss Bowdler.

## Bangalore.

### Gymkhana Tournament.—

Men's Singles—Sreedhara Murti.

Men's Doubles—Kosava Mudliar and Raju Iyer.

## Poona.

### Hindu Gymkhana Tournament.—

Singles—Wagle.

Doubles—Mrs. Saraf and Lelc.

### Poona Gymkhana Tournament.—

Men's Singles.—Mr. Friend.

Mens' Doubles.—Major Whellan and Capt Carr.

Mixed Doubles.—Mr. Keating and Mrs. Parker.

### Poona Open Tournament.—

Men's Singles.—Major Whellan.

Men's Doubles.—Whellan and Hastings

## Karachi.

### Annual Tournament.—

Men's Singles.—A. F. Thorpe.

Men's Doubles.—A. F. Thorpe and F. G. Travers.

Mixed Doubles.—A. F. Thorpe and A. N. Other.

## POINT-TO-POINT RACES.

### Bombay.

Mr. Lowndes' "Flyaway." .. .. 1st

Mr. Stileman's "Rob Roy." .. .. 2nd

Mr. Hearson's "Down South" .. .. 3rd

Mr. Dart on Mr. Bower's "Barbara." 4th

## PAPERCHASING.

### Calcutta.

Miss Damiano's Kalokotroni, Mr. Roddick up, by three-quarters of a length. Miss Damiano won the average cup with seven places to her

credit, counting 52 points. Next comes Mr. Eric Hayward with 5 places (27 points) and Mr. J. Hutchinson with 5 places (18 points) third.

## POLO.

### Rawalpindi Tournament.—

Peshawar Vale Hunt .. .. 5 goals

21st Lancers .. .. 4 goals

### Lucknow (Civil Service) Tournament.—

7th Hussars .. .. 3 goals

The Wanderers .. .. 1½ goals

### Meerut Tournament.—

7th Hussars "A" .. .. 5 goals

Bhopal Lancers .. .. 4 goals

## HOCKEY.

### Belghon Tournament (Calcutta)—

B. G. Association (Lucknow) .. 2 goals.

Calcutta Customs .. .. 1 goal.

### Age Khan Tournament (Bombay)—

Aligarh College .. .. 2 goals

The Hornets .. .. Nil.

### Elton Tournament (Bombay).—

B. E. S. Schools .. .. 1 goal

Cathedral H. School .. .. Nil.

### Bangalore Tournament—

North Lances Regt. .. .. 5 goals

M. and S. M. Railway .. .. Nil.

## FOOTBALL.

### Indian Football Association Shield (Calcutta).—

North Staffordshire Regt. .. .. 2 goals

Calcutta Football Club .. .. 1 goal

Owing to the war it was decided not to run the Rover's Tournament and the Harwood League in Bombay. The Durand Tournament (Simla) was abandoned also.

## GOLF.

## Bombay.

## Gentlemen.—

## Captains Cup.—

S. C. Mould .. .. . 1

T. A. Andrew .. .. . 2

## President's Cup.—

R. P. Scott .. .. . 1

E. E. Coombs .. .. . 2

## Challenge Shield and Gold Medal.—

F. L. Muir .. .. . 1

Capt. Rigby .. .. . 2

## Bombay Cup.—

F. L. Muir .. .. . 1

E. Ferrers Nickolson .. .. . 2

## Nasik Cup.—

P. E. Aitchison .. .. . 1

J. A. Cherry .. .. . 2

## Handicap Cup —

T. A. Andrew .. .. . 1

E. E. Coombs .. .. . 2

## Handicap Foursomes —

Greaves and Coombs .. .. . 1

Rigby and Cherry .. .. . 2

## Silver Medal for best round —

R. P. Scott 82

## Allied Pairs.—

Mr. and Mrs. Greaves.

## Ladies.—

## Bombay Bangle.—

Mrs. Mould .. .. . 1

Mrs. Pirrie and Miss Underhill .. .. . 2

## Silver Medal.—

Mrs. A. V. Anderson .. .. . 1

Mrs. Nelson .. .. . 2

## Stroke Competition.—

Mrs. Pirrie .. .. . 1

Mrs. Mould .. .. . 2

## Handicap Foursomes —

Mrs. A. V. Anderson and Mrs. Aitchison .. 1

Mrs. Mould and Mrs. Harrison .. .. . 2

## Putting Competition —

Mrs. Harrison .. .. . 1

Mrs. Gordon and Miss Underhill .. .. . 2

## Calcutta.

## Asian Cup—

Mr. J. D. Gatheral; Mr. E. A. Watson and  
Mr. J. Sevier (tied).

## Ladies' Championship—

Mrs. Hope Stewart; Mrs. Lamond Walker.

## CRICKET.

## Quadrangular Tournament.—

Final match between Presidency and Parsis  
abandoned owing to heavy rain.

## Harris Shield (Bombay)—

New English School beat Robert Money  
School by an innings and 87 runs

## WIRELESS TELEGRAPHY.

The annual report of the Indian Telegraph Department for 1915-16 states that the number of wireless stations in India and Burma has increased from 9 in 1910-11 to 19 in 1915-16. The number of messages dealt with in the latter year by the nine coast stations was 83,710.

**Licences to Officers.**—The Government of India have decided that the granting of licences to military officers in respect of wireless telegraph apparatus used for experimental purposes shall be regulated by the following general principles: (1) When an officer conducts experiments in wireless telegraphy in his official capacity at the expense of Government no licence is required, but only executive permission, which may be given so far as the Telegraph Department is concerned by the Director-General, Posts and Telegraphs.

(2) When an officer carries on experiments as a private individual at his own expense, he

must obtain a licence. If the approval of the military authorities is required to what he proposes to do, he should obtain such approval before the Director-General, Posts and Telegraphs, is approached. The licence will then be submitted by the Director-General, Posts and Telegraphs, for the sanction of the Government of India.

(3) With reference to the above, attention is drawn to the necessity for applying for licences to own and use wireless telegraph apparatus or installations, experimental or otherwise. Applications for such licences will be submitted through the Chief of the General Staff and will contain particulars regarding the apparatus showing (a) system it is proposed to employ, (b) maximum range of signalling with applicant's own receiving apparatus, (c) power (current and voltage), (d) source of power.

# Chronicle of the year 1916.

## JANUARY.

1st.—Proclamation Day. Indian Honours List included one G.C.S.I. (General Sir Beauchamp Duff, C.-in-C. in India), four K.C.S.I. (Sir Steynning Edgerley, Member of the India Council, Mr. H. V. Lovett, I.C.S., United Provinces; Mr. R. W. Gillan, President of the Railway Board, and H. H. the Maharaja Bhairon Singh of Bikaner); four C.S.I., one G.C.I.E. (H. H. the Maharaja of Jhind), one K.C.I.E. (Mr. E. Levinge, Member of the Executive Council, Bihar and Orissa), twenty-seven C.I.E., one K.C.B. (Major-General Playtre), nine Military C.B. and two Civil C.B. and seven Knighthoods, conferred upon Mr. Justice H. Holmwood, Bengal, Dr. Kallash Chandra Basu, Calcutta, Mr. Marshall Reid, Bombay, Baba Gurbaksh Singh Bedi, Punjab, Mr. W. B. Hunter, Madras, Mr. Justice F. M. D. C. Chinnier, Allahabad, and Mr. H. J. W. Fry, lately of the India Office.

The Home Honours List included Lord Curzon (to be K.G.); Sir John Jardine (to be Baronet); and Sir James Dunlop-Smith (to be K.C.V.O.)

General session of All-India Moslem League, in Bombay, having been broken up on December 31, adjourned meeting was held in Taj Mahal Hotel, only members of League and reporters being admitted. The business programme of the session was then carried out. A committee was appointed to frame "a scheme of reforms" to confer with other political organisations regarding it, paying due regard "to the need and interests of the Mussalmans of India," the committee to report to the council of the League in time for their scheme to be presented at the next annual sessions. A resolution recording the deliberate opinion of the League "that in the interests of the Mussalman community it is absolutely necessary that the principle of communal representation be extended to all self-governing public bodies," was carried by a large majority. The Hon. Raja Sahib of Mahmudabad was elected president of the League, Mr. Syed Wazir Hasan re-elected Hon. Secretary and Messrs. Mahomed Musakhan and Azar Ali, honorary joint-secretaries.

H. E. the Governor of Bombay, accompanied by Lady Willington, arrived in the course of a tour in Sind at Khairpur, on a visit to H. H. the Mir.

4th.—It was announced that of 501 people on board the P. and O. steamer Persia, which was torpedoed in the Mediterranean by a submarine on December 30, 160 were saved and that between 20,000 and 30,000 bags of mails addressed to Egypt and India were lost.

5th.—H. E. the Governor of Bombay at Karachi.

7th.—Annual report by Mr. C. E. Mallett concerning Indian students in England, published. It showed that the nucleus of a voluntary contingent for ambulance work at the front had been formed during 1915 by Indian students in London, 272 students having become enrolled

in the Indian Volunteer Ambulance Corps while 215 officers and men were at one time or another actively employed.

8th.—A force under Generals Aylmer, Young-husband and Kemball defeated the Turks on both banks of the Tigris near Sheik Saad.

H. I. M. the Tsar of Russia sent a telegram of congratulation through the Grand Duke Nicholas to General Sir John Nixon, on the success of the operations in Mesopotamia.

9th.—Officially announced that Gallipoli had been evacuated, the only casualty among the French and British troops during the operation being one British soldier wounded.

10th.—General Sir Percy Lake, Chief of Staff, and Brigadier General Olfrey Shore, Director of Staff Duties, Indian Army Headquarters, left Delhi for the Persian Gulf on field service, Sir Percy Lake having been appointed to command in Mesopotamia in succession to General Nixon.

13th.—The Turks on the Tigris were attacked by General Aylmer at Orah, 25 miles down the stream from Kut-al-Amarah, and compelled to retire, closely pressed by the British forces.

14th.—Notified in the *Gazette of India*, regarding 1916 I.C.S. examination "that any person who has joined since the 4th of August, 1914, or may join during the present war, the Army or Navy or Royal Marines, or has rendered, or may render, during the same period actual military service in the Special Reserve or Territorial Force, Royal Naval Reserve or Royal Naval Volunteer Reserve, may, if eligible in point of age under the regulations as they now stand for admission to the examination or competition held in 1915, 1916, 1917 (but over age in 1916, 1917 or 1918, respectively) deduct from his actual age at the time of the examination of competition held in 1916, 1917 or 1918, as the case may be, (a) the actual period of such service if it has not exceeded three months, (b) one year if the actual period of service has exceeded three months. No candidate will be allowed to deduct more than one year from his actual age....."

16th.—Announced in Delhi that H. M. the King-Emperor, on the recommendation of the Prime Minister, had been pleased to appoint Frederic John Napier Theagar, Baron Chelmsford, G.C.M.G., as Viceroy and Governor-General of India in succession to His Excellency the Right Hon'ble Charles, Baron Hardinge of Penshurst, P.C., G.C.B., etc. Lord Chelmsford left Bombay for England by the mail steamer on the same day, having been in India since November, 1914, serving as a captain in the first battalion 4th Dorsetshire regiment and subsequently in the 2nd Dorsetshire regiment.

17th.—H. E. the Viceroy having telegraphed to H. I. M. the Emperor of Russia in celebration of the Russian New Year, it was announced that His Excellency had received the following reply from His Imperial Majesty:—"I beg you to convey to the Government and the

Princes and people of India my warmest thanks for their New Year's wishes and their kind appreciation of the Russian army. I am deeply touched by the kind words of your telegram and express to you my cordial gratitude.—**NICHOLAS.**"

18th.—Judicial Committee of the Privy Council resumed sittings. There were on the list of cases twenty-one Indian appeals—six from Bengal; four from Madras; three from the North-West Provinces; three from Lower Burma; two from Bombay; two from Oudh; and one from the Punjab.

19th.—Twenty-nine survivors of the P. and O. s.s. Persia torpedoed in the Mediterranean arrived in Bombay by the P. and O. s.s. Medina.

20th.—H. E. the Governor of Bombay presided as Chancellor at special convocation of Bombay University called for purpose of conferring degree of Doctor of Laws on Mr. Dadabhai Naoroji.

General Townshend reported that all was well in his camp at Kot-ul-Amara and that the Turks surrounding him had been flooded out of their trenches as result of rise of river and compelled to retire 3,000 yards.

31st.—Preliminary meeting of leading citizens of Bombay, to consider what steps should be taken to mark city's appreciation of services rendered by H. E. Lord Hardinge to India and the Empire—decided to requisition Sheriff to call public meeting.

H. H. the Lieutenant-Governor of Behar and Orissa unveiled statue of H. E. the Viceroy in newly laid-out Hardinge park at Bankipore, proceedings being under direction of local Hardinge Memorial Committee presided over by Maharaja of Darbhanga.

Death announced of Sir Clements Markham, the great geographer, whose family had many links with India and who introduced cinchona (quinine) into India in the late fifties.

## FEBRUARY.

2nd.—Sudden death announced of Prince Jussuf Izzeddin, heir-apparent of Sultan of Turkey. Reports left no doubt that he was murdered because of his resistance to German Emperor's conspiracy against Turkey.

4th.—H. E. the Governor of Bombay and party at Dhrangadhra.

H. E. the Viceroy laid foundation stone of Hindu University at Benares. Maharaja of Darbhanga, President of University Committee, read an address in which he stated that contributions to University funds now amounted to close upon one crore of rupees, including capitalised value of annual grants sanctioned by Ruling Princes to which the Government of India had added annual grant of one lakh of rupees. H. E. the Viceroy in an encouraging speech declared it to be policy of Government of India to do all within their power and means to multiply number of universities throughout India.

Hon. Mr. Claude Hill, Revenue Member of H. E. the Viceroy's Executive Council, opened an agricultural educational conference at Pusa.

5th.—H. E. the Governor of Bombay at Jamnagar.

7th.—Ninth meeting of Board of Agriculture opened its sittings at Pusa, Mr. Coventry, Agricultural Adviser to the Government of India, presiding.

8th.—H. E. the Governor of Bombay at Rajkot.

9th.—H. E. the Governor of Bombay at Gondal and Junagadh.

10th.—H. E. the Governor of Bengal unveiled in Belvedere Gardens, Calcutta, a statue of Lord Curzon presented to Victoria Memorial Hall by Sir P. D. Pattani. Large and influential gathering of ladies and gentlemen, Sir Prabhakhar in long speech warmly eulogising Lord Curzon's work in India.

11th.—H. M. the King-Emperor received at Buckingham Palace loyal address from twenty-seven valiant Indian officers, who had been wounded in France. His Majesty welcomed

the presence of these Sirdars "as a symbol of the unity of the Empire" and expressed himself deeply touched, saying that all his subjects were fighting for a common heritage, "for the liberties of the Empire were put into the scale and with them the liberties which India has enjoyed under our rule, and which please God she will enjoy in increasing measure as she advances in the path of social improvement and political experience."

12th.—H. E. the Governor of Bombay at Palitana.

14th.—H. E. the Governor of Bombay at Bhavnagar.

16th.—Russian winter campaign on the Caucasus front culminated in the capture of Erzerum, the great Turkish stronghold in the centre of the Armenian plateau and the key to the Turkish north-eastern defences. Huge booty and large number of prisoners taken.

17th.—H. E. the Viceroy opened new Lady Hardinge Medical College for women in new city of Delhi.

19th.—The Hon. Lieut.-Colonel Sir John Ramsay, K.C.I.E., C.S.I., Agent to the Governor-General in Baluchistan, at annual provincial durbar at Sibi pointed out the mischievous manner in which Germany had obtained control of the Government of Turkey through the machinations of a few Turks who were notoriously in no way influenced by religious motives, and how Germany had endeavoured to cause outbreaks in Persia; while he also showed how much stronger the allies were than the Austro-German Powers and how inevitable was Germany's eventual overthrow.

20th.—Lord Chelmsford sworn in as Privy Councillor.

22nd.—Imperial Legislative Council, Delhi, the Hon. Sir William Clark presiding. Hon. Mr. C. E. Low presented report of Select Committee on Indian Ports Bill. Hon. Mr. O. R. Setaivald introduced Hindu and Mussalman Disposition of Property Bill. Hon. Mr. Dadabhai moved amendment that the Bill be

circulated for purpose of collecting opinions upon it and amendment was agreed to.

Mr. H. O. D. Hardinge, District and Sessions Judge, Trichinopoly, fatally stabbed by Mahomedan named Syed Ismail, while going to his court.

23rd.—The Portuguese authorities at Goa, under instructions from Portugal, seized a number of German and Austrian merchant steamers which took refuge at Marmugao on outbreak of war.

Column commanded by General Goringe, advancing along right bank of R. Tigris, routed Turks at Umm-al-Dug by firing across the stream.

26th.—H. E. the Viceroy invested H. H. Maharaja of Jodhpur with ruling powers.

27th.—P. and O. s.s. Maloja, carrying passengers and mails, was sunk off Dover at eleven o'clock in the morning; 64 passengers saved out of 119 and altogether 260 out of full complement of 411.

## MARCH.

1st.—The Hon Sir William Meyer, Finance Member of the Government of India, presented annual budget to Imperial Legislative Council, Delhi. Financial statement showed Imperial deficit £2,100,000, provincial deficit £800,000, making total deficit £2,700,000. Sir William budgetted for surplus of £1,052,000 in ensuing year, involving new taxation on customs and liquor amounting to £2,150,000, extra salt duty £800,000 and graduated increase in income-tax, £900,000, making a total of £3,650,000 from new taxation. It was also announced that Government would raise a loan of not less than £4 million in India and that subscriptions to it would carry privilege of converting equivalent amounts of 3½ or 3 per cent. paper on favourable terms.

2nd.—Death of Sir Chinubhoy Madhavai, of Ahmedabad, the first Hindu Baronet.

7th.—Imperial Legislative Council, Delhi. H. E. the Commander-in-Chief introduced Bill for trial by court-martial of foreigners for offences against the defence of India and Bill was passed through all its stages. Hon. Sir William Meyer presented Select Committee report on Tariff Amendment Bill required by the Budget and important debate took place concerning Indian fiscal policy, especially with regard to the duty on cotton goods, after which Bill passed. Hon. Sir W. Meyer also presented Select Committee report on Income-Tax Bill, and this also passed after interesting debate.

8th.—Series of attacks made on Turkish position at Es Sinn, on right bank of Tigris, six miles from Kut-al-Amara, but none reached its objective.

9th.—Imperial Legislative Council. Hon Finance Member opened first stage of discussion on financial statement. Hon. Sir Ibrahim Rahimtoola moved reduction by £600,000 of estimate for salt revenue, so as to retain rate of taxation at Re. 1 per maund as at present. Amendment lost. Hon. Mr. Surendranath Bannerji moved resolution providing that grant to province of Bengal be increased by rupees six lakhs for anti-malarial operations. Hon. Sir Sankaran Nair opposed resolution on ground that this was matter for provincial government. It was withdrawn by mover, who, in response to similar argument by Sir Sankaran Nair, also withdrew resolution providing for grant of three lakhs of rupees for equipping Calcutta University College of Science. Hon. Mr. Claude Hill introduced budget of Revenue and Agricultural Department, and Hon. Sir Sankaran Nair the Education section

of Budget. Hon. Sir William Clark presenting sections concerning Commerce and Industry Department. Dr. M. N. Bannerjee moved recommendation to give medical students special course to qualify for ordinary medical practice in rural areas. This was accepted.

13th.—Bombay Legislative Council, Bombay. Hon. Mr. Carmichael presented financial statement; debate opened. Prevailing note in budget was retrenchment.

Bengal Legislative Council met in Calcutta Central Provinces Legislative Council at Nagpur, and United Provinces Legislative Council at Lucknow, annual financial statement being presented in each case.

14th.—Bombay Legislative Council. Hon. Mr. W. D. Sheppard moved first reading of Bill further to Amend Bombay Medical Act, 1912. Bill passed through all stages. Hon. Mr. V. F. Patel moved recommendation for creation of civil court for town and island of Bombay for suits not exceeding Rs. 5,000 in value. H. E. the President pointed out that term of Council expired at end of present sessions so that even if resolution were passed it would have to be brought in afresh, in new Council before action could be taken on it. His Excellency promised that if resolution were withdrawn Government would consider the whole situation and make fullest inquiry into the subject. After some discussion an amended resolution was agreed to. Two resolutions by non-official members specifying method of utilising donation of Rs. 8 lakhs given by Sir Mahomed Yusuf Sodagar stood on paper, but H. E. the President said Government intended to consult wishes of donor as to disposal of money and resolutions were not proceeded with.

Punjab Legislative Council met at Lahore, financial statement presented.

15th.—Imperial Legislative Council, Delhi. Ports Act Amendment Bill passed. Hon. Sir Pardee Luki moved consideration of report of Select Committee on Bill to prevent grant to unqualified persons of titles implying qualifications in western medical science and assumption and use by such persons of such titles, and after lengthy debate the Bill as amended by Select Committee was passed. Hon. Mr. Azad Ali Khan moved recommendation that Government of India in consultation with local governments should investigate possibility of placing ancient and indigenous systems of medicine on scientific basis and increasing their usefulness, and after considerable debate the proposition, which was supported by Sir Pardee

**Lanka**, was carried. Following resolution debated on motion of the Hon. Mr. Dadabhoy—“This Council recommends to the Governor-General in Council that steps be taken by the Government for the exhibition of official war films and that facilities be given to students in Government institutions to see them and that encouragement be given to visual instruction.”

**Bombay Legislative Council.** Hon. Dewan Bahadur K. R. Godbole moved resolution recommending inquiry with view to action being taken to check minute sub-division of agricultural lands. After comprehensive debate resolution was lost. Hon. Mr. Belvi moved recommendation to revoke Government notification of previous October in so far as it excluded offences or attempts to commit, or abetment of, offences cognisable by Sessions Court from jurisdiction of jurors in Belgaum district, but after long debate resolution was negatived by 26 votes to 10. Resolution by Hon. Mr. Godbole in favour of investigations regarding water power available in Presidency was agreed to. Council also accepted resolution by Hon. Mr. Paranjpye in favour of change of rules and forms of High Court whereby High Court pleader might be enabled to appear in matters of ordinary jurisdiction from which they are at present debarred.

Public meeting of citizens of Bombay, in Town Hall, to record appreciation of great services rendered by Lord Hardinge as Viceroy of India and to consider what steps should be taken to accord him fitting honour on occasion of his departure from Bombay and to preserve his memory. Resolution of appreciation was passed and committee was appointed to raise memorial to Lord Hardinge in Bombay.

**16th.**—Bombay Legislative Council. Hon. Rao Bahadur G. K. Sathie moved recommendation to Government to give financial assistance to municipalities—lost. Resolution by Hon. Sir Jamsetjee Jejeebhoy in favour of appointment of Parsi Coroner to preside over inquests of Bombay Parsis was, after debate, withdrawn. Resolution by Hon. Mr. B. S. Kamat in favour of extension of system of advisory excise committees for districts and rural areas was accepted. Proposition by Hon. Mr. N. M. Samarth recommending reconversion of rural schools into full primary schools at least in all large villages was lost, as also was proposition by Hon. Rao Saheb V. S. Naik recommending opening of Kanarese primary schools in parts of Sholapur district. Hon. Moulvie Rafiuddin Ahmed moved recommendation that number of free studentships in Government High schools be increased to at least 15 per cent. Director of Public Instruction said all Government high schools were already quite full and expense involved in carrying out proposed scheme would obstruct certain necessary reforms, but proposition was carried by 18 votes to 17. Council passed resolution of regret at death of Sir Chinubhai Madhavai, Bart.

**17th.**—Yacht Sunbeam formally presented to Government at Bombay by Lord Brassey for use as hospital ship.

**Death of Mr. Vitthaladas Samaldas, Ex-Dewan of Bhavnagar and elder brother of Hon. Mr. Lalubhai Samaldas.**

**18th.**—Lieut. Governor of the United Provinces (Sir James Meeson) performed opening ceremony, of King Edward Memorial Hall at Cawnpore which been built and furnished at cost of Rs. 2 lakhs.

**21st.**—Imperial Legislative Council, Delhi. Hon. Sir William Meyer presented budget for 1916-17, which showed that Imperial deficit previously announced was decreased by £192,000 and Provincial deficit by £93,000. Sir William next introduced Bill further to Amend the Indian Paper Currency Act of 1910, which was passed. Hon. Pandit Madan Mohan Malaviya introduced Bill to Amend the Indian Registration Act of 1908 and moved that it be referred to Select Committee—agreed. Hon. Pandit Malaviya next introduced Bill to Amend Transfer of Property Act of 1882 and Bill was sent to Select Committee. Hon. Sir Ibrahim Rahimtoola moved resolution recommending Governor-General-in-Council to appoint committee of officials and non-officials to consider and report what measures should be adopted for growth and development of industries in India. After several non-official members had spoken in support of motion Hon. Sir William Clark announced that upon recommendation of Government of India His Majesty's Government had approved appointment of commission on the subject, consisting of Sir Thomas Holland, as chairman, and seven or eight other members to be selected from among businessmen, experts and officials, of whom three would be Indians.

**22nd.**—Imperial Legislative Council: Hon. Mr. Surendranath Banerjee moved that Calcutta University be placed on same footing as those of Madras and Bombay in respect of relations between Calcutta University and the head of the local Government for purposes of administration and control. After lengthy debate resolution was accepted.

**23rd.**—Government of Bihar and Orissa issued re-assuring statement explaining recent unrest at Orissa, in Chota Nagpur. It appeared movement was originally religious and social, but developed into prayers at secret meetings invoking the German Kaiser and in some acts of violence and witch-hunting, several supposed witches being brutally murdered. Movement died down with harvesting of the winter crops, which were unusually good.

**Death of Lord Scarsdale, father of Lord Curzon of Kedleston.**

**24th.**—Imperial Legislative Council. H. E. the Viceroy, before commencement of proceedings, unveiled marble busts of late Sir John Jenkins and Sir Guy Fleetwood Wilson in vestibule of Council Chamber. Hon. Sir William Clark, on behalf of the Hon'ble members, conveyed to H. E. the Viceroy Council's hearty congratulations on the bestowal upon him by H. M. the King-Emperor of Order of the Garter. Several non-official members supported Sir William. Main business was discussion of budget and after this H. E. the Viceroy delivered long and comprehensive farewell address, dealing with large number of current questions,

among most important being Indian racial policy, the ideal of Indian self-government and the place of India in the Empire.

25th.—H. E. the Viceroy received farewell addresses from Delhi Municipality and Taluqdars of Oudh at Viceregal Lodge, Delhi, and attended farewell garden party given in his honour by non-official members of Legislative Council, who presented farewell address prepared by All-India Farewell Committee, address being

read by Babu Surendranath Banerjee.

The cross-Channel steamer *Sussex*, carrying Indian and Colonial mails, was torpedoed without warning by a German submarine while crossing from England to France. There were 360 passengers on board, all of whom were saved.

31st.—H. E. the Viceroy left Delhi, *en route* for Bombay and England.

## APRIL.

2nd.—Lord Hardinge arrived in Bombay. His Excellency spent morning visiting wounded in various war hospitals and in evening attended divine service at Cathedral.

3rd.—Lord Hardinge received at Government House, Bombay, farewell addresses from Bombay Chamber of Commerce and Indian Merchants' Chamber and Bureau, both of which paid glowing tributes to high statesmanship which had characterised his Viceroyalty. His Excellency in afternoon attended special convocation of University of Bombay, when honorary degree of LL.D. was conferred upon him. Subsequently public garden party was held in University gardens, when His Excellency received addresses from Sir Jamsetji on behalf of citizens of Bombay and from representatives of following districts in Bombay Presidency:—Karachi, Thar and Parkar, Upper Sind frontier, Hyderabad (Sind), Ahmedabad, Surat, Panch Mahals, Kaira, Thana, Satara, Ahmednagar, Sholapur, Dharwar, Kolaba, Ratnagiri, and Kanara. Proceedings were marked by great cordiality, and Lord Hardinge was visibly affected by the warmth of feeling shown towards him. In the evening H. E. the Governor and Lady Willingdon gave farewell dinner party at Government House, over seventy guests being present.

4th.—Lord Chelmsford, Viceroy-designate, accompanied by Lady Chelmsford and three of their daughters, arrived at Bombay, and received, on landing at Apollo Bunder, address of welcome by Bombay Municipality. Lord Chelmsford subsequently received at Government House addresses by Chamber of Commerce and Indian Merchants' Chamber and Bureau. At 5-30 p.m., Lord Chelmsford, accompanied by Lord Willingdon, proceeded to the Secretariat and assumed office as Viceroy and Governor-General in presence of his Executive Council. Lady Chelmsford, accompanied by Lady Willingdon, visited war hospitals during day. Their Excellencies Lord and Lady Chelmsford and their retinue left Bombay for Delhi at night.

Lord Hardinge embarked from Apollo Bunder on board P. and O. ss. *Arabia* for England at 4-30 p.m. His Excellency arrived at Bunder in state and was received with rousing cheers from a very large assembly. A farewell address, warmly eulogizing Lord Hardinge's viceroyalty and wishing him godspeed, was presented by Bombay Municipality, being read by their Chairman, Mr. Chunilal V. Mehta. His Excellency spoke with much feeling in reply, and after shaking hands with large number of people stepped on board his launch accompanied by Hon. Diamond Hardinge and by Lord and Lady Willingdon, amid manifestations of heartfelt regret.

5th.—Reports received of enthusiastic and popular demonstrations in all parts of Portuguese possessions in India on declaration of war by Portugal against Germany.

General Lake reported from Mesopotamia that at 5 a.m., Tigris corps attacked Turkish position at Umm-el-Hennah, on south bank of Tigris, about 18 miles below Kut-el-Amara.

Capture of Turkish position at Falahiyah, on northern bank of Tigris, officially reported. Reports also received of great difficulties now besetting the army on Tigris, as result of heavy rain and rising floods.

6th.—Their Excellencies the Viceroy and Lady Chelmsford with their daughters and His Excellency's personal staff arrived at Delhi and were given public reception.

7th.—Delhi Municipality presented address of welcome to H. E. the Viceroy, and Lord Chelmsford in reply said he had made a point of paying Delhi his first public official visit in India, inasmuch as H. M. King-Emperor had made that city the capital of India.

8th.—Death of Sir Collin Scott-Moncrieff, K.C.S.I., K.C.M.G., who performed distinguished services in India as an irrigation engineer.

11th.—There was published letter dated April 4 from H. E. Lord Hardinge to Lady Willingdon, in which His Excellency declared himself greatly touched by wonderful generosity of Bombay people who had responded to his appeal for funds for Lady Hardinge Medical Hospital for Women at Delhi, and asked that as there was balance of funds left over in Bombay it should be retained with view to opening permanent maternity home in city, named "The Lady Hardinge Memorial Home".

Extraordinary meeting of shareholders of Alliance Bank of Simla, in Simla, confirmed arrangement recently made by the directors for amalgamation with Punjab Banking Company.

H. E. the Viceroy arrived at Calcutta and received address of welcome from Municipality.

13th.—H. E. the Viceroy paid number of visits to Calcutta institutions and attended large reception given in his honour at Government House in the evening.

Bombay Municipal Corporation passed resolution, which was warmly supported by numerous speakers, expressing high appreciation of very valuable services rendered by Mr. P. R. Cadell, C.I.E., I.C.S., to city in his capacity as Municipal Commissioner during past six years, and of conspicuous ability he had displayed in that office. Letter was read from Government

announcing appointment of Mr. S. M. Edwards, M.V.O., I.C.S., to be Municipal Commissioner on Mr. Cadell's appointment as Chief Secretary to Government.

14th.—Annual meeting of Bombay Millowners' Association. Discussion of annual report chiefly dealt with excise duty and position of India within the Empire in regard to fiscal policy.

16th.—Hon. Mr. W. D. Sheppard and Mrs. Sheppard left Bombay for England on Mr. Sheppard's retirement from Bombay Executive Council in order to assume duty as Member of India Council.

17th.—British forces commanded by General Goringe stormed and carried strong Turkish positions at Beit Jessa, on right bank of Tigris, thus bringing British line to within four miles of Turkish position at Es Sinn, the key to Kut-el-Amara.

18th.—Turks on Tigris launched repeated counter-attacks against advance of British

forces, but were repulsed with heavy losses.

20th.—Their Excellencies the Viceroy and Lady Chelmsford arrived in Simla.

Announced by Government of India that Mr. T. O. Hughes, Acting Political Agent at Makran and commandant of Makran Levy Corps, and Second-Lieutenant G. B. Horst, I.A.B.O., attached to the corps, had been shot dead at Mand, in Makran, by two Rind tribesmen, brothers of well-known outlaw. Levies promptly avenged their deaths by killing the two assassins.

29th.—Surrender of Kut as result of exhaustion of supplies. All guns and ammunition were destroyed. The captured force consisted of 2,970 British troops and 6,000 Indian troops, and followers.

30th.—Government of India announced it no longer necessary to maintain scheme announced on March 25th, 1915, for controlling export of wheat.

## MAY.

1st.—Results of last elections to new Bombay Legislative Council declared.

2nd.—Syed Ismail, who murdered Mr. H. O. D. Hardinge, District and Sessions judge, Trichinopoly, sentenced to death by Sessions Court of Tanjore.

6th.—Sir Thomas Holland arrived in India to initiate work of Commission on Indian Industries.

8th.—Indian Consolidation Act Amendment Bill passed first reading in House of Lords.

16th.—News was published that Portuguese Government had sent orders to Governor of Nova Goa directing him to introduce compulsory military service, and that the Governor, considering measure unsuitable for Indian conditions had refrained to promulgate it and made representations to Lisbon authorities.

Lady Willingdon left Bombay for England on some months' leave, and before leaving was recipient of small presentation from Women's Branch of Bombay Presidency War and Relief Fund.

24th.—India Bill passed second reading in House of Lords.

Empire Day celebrated by all communities throughout India.

20th.—News published that Rear-Admiral Sir Rosslyn Wemyss appointed to succeed Vice-Admiral Sir Richard Peirse in command of East Indies Squadron.

29th.—P. and O. ss. Caledonia arrived in Bombay eight hours overdue, having been delayed by most furious cyclone reported during many years.

## JUNE.

3rd.—King's birthday Honours list included:—Three C.B. (Brig.-General L. C. Dunsterville, I.A.; Col. F.W.H. Cox, I.A.; and Col. H. Kennedy, I.A.); two K.C.S.I. (the Hon. Mr. A. G. Cardew, Member of Council of Governor of Madras; Lieut.-Col. Sir Hugh Daly, lately Resident in Mysore and Chief Commissioner, Coorg); one honorary C.S.I. (Sheikh of Kuwait); five C.S.I. (Mr. L. Robertson, Secretary to Government of Bombay; Hon. Mr. J. G. Cumming, Chief Secretary to Government of Bengal; Lieut.-Col. S. H. Apin, I.A.; Sir James Du Boulay, C.S., lately Private Secretary to Viceroy and Hon. Mr. J. B. Wood, C.S. (Foreign Secretary to Government of India); one honorary K.C.I.E. (Sheikh of Mohammurah); five K.C.I.E.; one additional K.C.I.E. for War Services (Hon. Captain Malik Umar Hayat Khan, of Kaira); twenty-three C.I.E.; nine additional C.I.E. for War Services; seven Knightships (Mr. O. B. Simpson, Madras; Dr. Stanley Reed and Mr. Baten J. Tata, Bombay; Hon. Mr. F. H. Stewart and Hon. Mr. Justice C. W. Chitty,

Calcutta; Hon. Mr. M. W. Binning, Rangoon and Mr. It. S. Highet, Agent, E. I. Ry.).

5th.—Earl Kitchener and his staff drowned in H. M. S. Hampshire, which struck a mine off Orkney Islands while en route to Russia, whether Lord Kitchener was proceeding on a special mission.

8th.—Details issued of new Government of India four per cent. Conversion Loan of six crores, or twelve crores if the second six crores were offered by the public.

9th.—Revolt against Turkey begun in western and Central Arabia under the Grand Sheriff of Mecca, who proclaimed Arabian independence.

12th.—Death of Mr. Howard Benaman, joint editor of *The Pioneer*, at Simla, after being on *Pioneer* staff for over thirty years.

News published of important new discovery of radium deposits in Singar estate, near Gaya, Bengal.



20th.—Bombay Legislative Council, Poona. Presentation of revised budget and debate thereon.

21st.—Bombay Legislative Council; Bill further to amend City of Bombay Municipal Act introduced and after long discussion read first time and referred to Select Committee.

22nd.—News received that revolt of Grand Sheriff of Mecca had resulted in capture of Mecca, Jeddah and Taif, with guns and troops,

Medina being closely besieged, and all communications to the Hedjaz in hands of Sheriff.

26th.—H. E. the Governor of Bombay presided at annual durbar of Sardars of the Deccan, at Poona, and made lengthy speech.

30th.—Deputy Superintendent, Basanta Kumar Chatterjee, Intelligence Branch, C.I.D., shot dead at Bhowanipore by a party of five young Bengalees.

## JULY.

8rd.—Extraordinary general meeting of shareholders, Alliance Bank of Simla, at Simla, unanimously confirmed provisional arrangement for amalgamation with Delhi and London Bank on a basis of purchase of all shares of that Bank at the price of £20 for each £25 fully paid up share, Alliance Bank creating further Rs. 20 lakhs of preference shares to enable this to be done.

Railway Board issued circular to the Chambers of Commerce and Trades Associations inviting their opinions concerning question of State, as compared with Company, management of railways.

7th.—Obituary: Sir Edward Buck, K.C.S.I., late I.C.S.

8th.—Public meeting in Bombay Town Hall to protest against certain clauses in Government of India Consolidation Act Amendment Bill.

10th.—Belgian Children's Day celebrated throughout schools of Bombay Presidency and elsewhere in India, substantial subscriptions being obtained for Belgian children.

15th.—Remaining forts at Mecca reported to have surrendered to the Sheriff, 28 officers, 1,100 men, four guns and large quantity of war material and munitions being captured, making total of ten field guns, two mountain guns, fifteen machine guns, 100 officers, 2,500 soldiers and 150 civil officers captured since independence proclaimed.

16th.—Karachi received seven inches of rain, the equivalent of a whole year's normal rainfall, within four hours. Much damage done.

17th.—Heavy storm off Ceylon coast. Over 500 fishermen driven seaward and perished.

20th.—Sir Victor Horsley died of heat-stroke in Mesopotamia, whither he had gone for active medical service as a volunteer.

House of Commons adopted a motion moved by Sir Edward Carson and accepted by Government that committees be appointed to inquire into the conduct of operations in the Dardanelles and Mesopotamia.

Mr. Lloyd George, Secretary of State for War, announced in the House of Commons a revision of arrangements between Government of India and War Office with regard to Mesopotamia, stating that War Office would take over control of forces in Mesopotamia and of organisation and supplying of those forces. Debates on Mesopotamian campaign took place in both Houses of Parliament.

25th.—Bombay Legislative Council, Poona. Bill further to amend the City of Bombay Municipal Act passed. Bills further to amend the Bombay Abkari Act, 1878, and the City of Bombay Police Act, 1902, introduced and referred to Select Committees. Private resolutions.

26th.—Railway Congestion Conference opened in Calcutta, the Hon. Sir George Barnes presiding. Delegates from all parts of India, attended.

29th.—Obituary: The Hon. Justice Sir Dinsha D. Davar, Bombay High Court.

31st.—Obituary: Sir W. S. S. Bisset, K.C.I.E., R.E., Chairman of the B. B. & C. I. Railway, London.

## AUGUST.

1st.—Government of India announced that all obstacles in way of pilgrimage in Mecca had been removed, though shortage of shipping in Bombay would be serious obstacle to pilgrims.

2nd.—Hon. Sir William Meyer, Finance Member of Government of India, and Hon. Sir George Barnes, Member of Commerce and Industry, accompanied by Hon. Mr. C. E. Low, Secretary for Commerce and Industry, met Bombay Chamber of Commerce and Bombay Indian Merchants' Chamber and Bureau, with whom they had important discussions on trade questions connected with the war and in particular the problem of India's fiscal position after the war.

4th.—Intercession services in connexion with second anniversary of Great Britain's entry

into war held in places of worship of all creeds and races throughout India.

5th.—Preliminary note on inquiry by Indian Industrial Commission issued by Government of India.

10th.—Bombay Presidency Branch, Imperial Indian Relief Fund, issued report for six months ended June 30th, showing that total amount expended within the six months was Rs. 7,60,514 closing balance being Rs. 32,71,044, of which Rs. 15 lakhs was earmarked for Viceroy's Central Fund. Fresh subscriptions during half year amounted to Rs. 6,65,124.

12th.—Mr. Bal Gangadhar Tilak was bound over by Mr. G. W. Hatch, District Magistrate, Poona, in his own recognisance for Rs. 20,000, and those of two sureties for Rs. 10,000 each,

to be of good behaviour for one year, proceedings having been instituted on speeches delivered by Mr. Tilak in Belgaum and elsewhere.

14th.—Report of recent Belgian Childrens Day collections in Bombay Presidency showed that Rs. 76,112 were subscribed.

Secretary of State informed Commons that report of Vincent Committee on conditions in Mesopotamia, would not be published pending inquiry of Mesopotamia Commission.

15th.—Bombay University annual convocation: H. E. the Governor, as Chancellor, presided and Rev. Dr. D. Mackichan, Vice-Chancellor, delivered annual address.

First meeting of the court of the Hindu University, Benares, Maharajah of Benares presiding, owing to unavoidable absence of the Pro-Chancellor, H. H. Maharajah Scindia.

16th.—Central Provinces Legislative Council assembled for first time in fine new council hall at Nagpur. First business was of unveiling of

portrait of Hon. Sir Reginald Craddock presented by Hon. Mr. Dadabhoi, who in speech warmly eulogised Sir Reginald's services to the Central Provinces.

21st.—Announced that General Sir Beauchamp Duff, Commander-in-Chief in India, was being recalled to England to give evidence before Mesopotamia Commission and that Lieutenant-General (temporary General) Sir O. C. Monro, G.C.M.G., K.C.B., had been appointed Commander-in-Chief in India.

24th.—H. E. Governor of Bengal made speech at Dacca, in which he defended Bengal Government's action under Defence of India Act in view of dangerous political situation in Bengal.

25th.—Grand Sheriff of Mecca issued proclamation explaining his revolt by denouncing Turkish misrule, surrender of Turkish Government to German control and abandonment by Young Turks of the doctrines of Islam.

27th.—Rumania declared war on Austria.

## SEPTEMBER.

1st.—Heavy Ganges floods.—Twenty-five villages reported swept away in Northern India.

14th.—Governor of Punjab in speech to his Legislative Council, in Simla, reviewed the suppression of the revolutionary conspiracy in Central Punjab in early part of year and paid tribute to the loyal and splendid part played by the Punjab in the war.

2nd.—Obituary: Sir John Lambert, K.C.I.E., I.C.S., retired, formerly Commissioner of Calcutta and member of Bengal Legislative Council.

5th.—Imperial Legislative Council, Simla, H. E. the Viceroy presiding. Lord Chelmsford, in an opening speech, reviewed the general outlook at great length and declared time was inopportune for discussing "certain failures in administration which were alleged to have occurred in connection with the Mesopotamia campaign." His Excellency described in detail the great part which the Indian Army had played in various fields of warfare.

6th.—Rev. H. Hostens, S.J., St. Xavier's College, Calcutta, in paper before Asiatic Society of Bengal, referred to the tradition that Akbar, Emperor of India 1542-1605, had a Christian wife. He advanced reasons for believing this lady was not an Indian convert to Christianity, but an Armenian, named Maryam Zamani Begum. He pointed out that among numerous questions involved were whether she was mother of Emperor Jehangir, who succeeded Akbar, for Jehangir called his mother Maryam Zamani, and whether she was also mother of Akbar's third son Prince Danyal, whose mother was also called Bibi Maryam.

Out of 150 recruits accepted for Bengal Double Company to be attached to the 46th Punjab about 100 left Calcutta by train for Nowshera for training and active service, this being first batch.

8th.—Eleven officers, 11 Medical Establishment and 305 sick and wounded prisoners passed through Basra in hospital ships on route to India, in exchange for sick and wounded Turks this being the second batch exchanged under agreement with Turkish authorities.

18th.—Announced that Mr. A. B. Marten, Barrister-at-Law, had been appointed Puisne Judge of Bombay High Court in succession to Hon. Mr. Justice Davar deceased.

19th.—Imperial Legislative Council, Simla, H. E. the Viceroy presiding. Hon. Mr. G. R. Lowndes introduced an amending Bill required by the institution of a High Court at Patna. A bill to consolidate enactments relating to Indian Steam vessels was introduced. A Bill to amend the Lunacy Act, 1912, was, on motion of Sir Reginald Craddock, considered and passed. Select Committee's report on Disposition of Property Bill presented.

27th.—General Sir Beauchamp Duff, Commander-in-Chief in India, sailed from Bombay for England.

Imperial Legislative Council, Simla. Repealing and amending Bill introduced by the Hon. Law Member at last Session and Bill to make provision in connection with the present war with respect to Bills of exchange payable outside British India, were passed. Hon. Sir Sankaran Nair introduced Patna University Bill. Hon. Mr. C. H. Stalvad's Disposition of Property Bill was, on report of Select Committee, passed.

28th.—Obituary: Most Rev. Dr. Herman Jurgens, Roman Catholic Archbishop of Bombay.

30th.—Annual meeting, Bombay Indian Merchants' Chamber and Bureau. Interesting discussion regarding Indian trade after the war.

## OCTOBER.

1st.—Agency of P. & O. S. N. Company in Bombay transferred to Messrs. Mackinnon Mackenzie and Company, the old P. & O. Office in Bombay being closed, but whole staff engaged there being transferred.

4th.—General Sir Charles Monro, new Commander-in-Chief in India, arrived at Bombay from England and left again same day by sea for Basra.

6th.—General Sir Beauchamp Duff issued a special order to Army in India on relinquishing Commander-in-Chiefship.

9th.—Heavy floods reported in Assam, the whole of Cachar district, numerous other villages and several tea gardens and greater portion of Sibsai town being under water.

10th.—Yuvraj of Mysore appointed Pro-Chancellor of the new Mysore University.

11th.—Following meeting in Bombay in March, which resolved to erect memorial statue of Lord Hardinge in Bombay, appeal issued for subscriptions; also announced that several large subscriptions already received, including Rs. 50,000 from Nizam, Rs. 25,000 from Maharaja Scindia, Rs. 15,000 from Maharaja of Dhar and Rs. 10,000 from Maharaja Holkar.

H. E. the Governor of Bombay and Lady Willingdon arrived at Viceregal Lodge, Simla, as guests of Their Excellencies Viceroy and Lady Chelmsford.

14th.—General Sir Percy Lake's despatches describing operations of the Indian Expeditionary Force in Mesopotamia, from January 19 to April 30, which period included the attempts to relieve Kut and the fall of Kut, published in *Gazette of India*.

H. H. the Maharaja of Bikaner unveiled at Bikanir canopied marble statue of His late altness Maharaja Dungan Singhji Bahadur, former ruler of Bikaner, who is regarded as the founder of the modern State, father of the reformed administration and organiser of good internal government.

16th.—Details published in *Times of India* of newly formed River-craft Board, appointed under Railway Board to organize Indian

shipbuilding for purposes of meeting river-craft requirements to the fullest possible extent. (Mr. Cochran, of Burn & Co., Calcutta, appointed Chairman, on nomination of Indian Engineering Association).

18th.—Madras High Court dismissed application by Mrs. Anne Besant against Presidency Magistrate's order requiring her to deposit security with regard to the paper *New India*.

21st.—16th Bombay Provincial Conference, Ahmedabad.

22nd.—Obituary: Sir Jacob Sassoon, Bart.

26th.—Obituary: Sir John Muir-Mackenzie, K.C.S.I., M.R.A.S., who served in the I.C.S. from 1876 to 1910.

28th.—Indian Industrial Commission assembled at Delhi to begin recording evidence.

30th.—Conference of Indian Princes and Chiefs at Delhi under Presidency of Gaekwar of Baroda, the senior Prince present. Viceroy, in opening speech, said that in times to come "some constitutional assembly might grow out of these conferences", but "for the present I would ask you to content yourself with the prosaic but useful task of advising the Government of India on certain specific matters.... We may, I think, leave the future to decide for itself the question of constitutional development as it arises." Gaekwar, in replying for Princes and Chiefs, said they cherished a hope of future development on constitutional lines, for with the march of the times it was in their opinion "of the utmost importance to ourselves, our States and our people that we should have a regularly assigned and definite place in the constitution of the Empire and indeed that there should at an early date come into existence an institution which we have consistently advocated, such as a council or assembly of Princes formed on proper lines, where important questions concerning ourselves can be discussed and settled." His Highness stated that the Princes and Chiefs also aspired, representing as they do an area of one-third of the Indian Empire and one-fourth of its entire population, "to have a voice in the settlement thereof."

## NOVEMBER.

2nd.—H. E. the new Commander-in-Chief in India, Lieutenant-General Sir Charles Monro, K.C.B., landed at Bombay, having visited Mesopotamia on the way out from England.

6th.—P. & O. steamer Arabia torpedoed and sunk without warning in Mediterranean, on homeward voyage. Arabia carried 437 passengers, of whom 169 were women and children, and heavy mails. All passengers saved; all crew saved except two engineers, believed killed by the explosion. Mails and valuable cargo lost.

7th.—Reports received that heavy rain having fallen in Karnool and Cuddalore districts, Madras, many rivers overflowed and tanks and canals burst, so that some 50 villages were

flooded, several lives lost, great damage done and much distress caused.

9th.—Bombay High Court, on application of Mr. B. G. Tilak, set aside the order by Poona District Magistrate binding Mr. Tilak over to be of good behaviour for one year on account of political speeches delivered by him in Marathi in the districts.

11th.—Viceroy and Lady Chelmsford visited Jaipur.

14th.—Despatch by Lieutenant-General Sir Percy Lake on operations of Indian Expeditionary Force in Mesopotamia from April 30 to August 27, when General Lake relinquished command, published in *Gazette of India*.

15th.—Viceroy and Lady Chelmsford at Udaipur.

17th.—Great War Sale and Fete in Bombay, for the benefit of Bombay Women's Branch War and Relief Fund, opened with auction sale of cotton bales subscribed by numerous donors. Highest price for one bale was Rs. 12,300 and total amount realised was Rs. 1,48,112.

18th.—Viceroy and Lady Chelmsford at Mayo College, Ajmer.

23rd.—Bombay Municipal Corporation, at instance of Provincial Government, acting on motion of Government of India, adopted amendment to Municipal Act, so as to disqualify other than British subjects or subjects of any State in India from being electors or candidates for seats on the Municipality.

25th.—Government of India announced the appointment of Committee under Chairmanship of Mr. Sly to inquire into and report upon organization and system of administration of Buildings and Roads Branch, P. W. D., with object of deciding whether it can be improved and rendered more economical and efficient, especially with reference to encouragement of private enterprise, further decentralisation, education, training, etc.

26th.—Club for Military Nurses in Bombay opened in Admiral's House.

27th.—Great War Sale and Fete in Bombay culminated in net profit of Rs. 5,64,454.

H. E. The Viceroy accompanied by Lady Chelmsford opened the new High Court at Allahabad.

## DECEMBER.

2nd.—H. E. The Viceroy and party arrived at Rangoon, on visit to Burma.

4th.—Bombay Legislative Council, Bombay, H. E. the Governor presiding. Bill further to amend the City of Bombay Police Act read second time and finally passed into law. Select Committee's report on Bill further to amend Bombay Abkari Act, 1878 (in order to check illicit distillation of liquor from Mhowra flowers in Kaira district), read second time, after lengthy debate.

5th.—Bombay Legislative Council Abkari Bill passed. Bill further to amend Bombay Port Trust Act, Bombay District Municipal Act and Bombay Local Boards Act read first time and referred to Select Committees.

6th.—Bombay Legislative Council Bill to amend law for inspection and management of boilers and prime movers in the Presidency of Bombay read first time and referred to Select Committee. Some private resolutions dealt with.

7th.—Bombay Legislative Council. Private resolutions.

Ahmedabad Fete for benefit of Women's Branch of Bombay Presidency War and Relief Fund opened.

8th.—Death announced of Sir J. B. Lyall, K.C.S.I., G.C.I.E.

12th.—Obituary. General Sir George Luck, K.C.B.

16th.—Thebaw, ex-king of Mandalay, died at Ratnagiri from heart and kidney trouble, having been in exile since 1885.

22nd.—H. E. the Viceroy and party arrived at Calcutta for a short stay after their visit to Burma.

26th.—Indian National Congress opened at Lucknow, Babu Ambika Charan Muzumdar presiding.

30th.—All-India Moslem League opened at Lucknow.

## INTEREST TABLE.

FROM 5 TO 12 PER CENT. ON RUPEES 100.

Calculated for 1 Year, 1 Month (Calendar), 1 Week, and 1 Day (365 Days to Year), the Decimal Fraction of a Pie for the Day being shown for the Day.

Per cent.	1 Day.		1 Week.		1 Month.		1 Year.	
	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.	Rs.	A. P.
5	0 0	2 630	0 1	6	0 6	8	5 0	0
6	0 0	3 156	0 1	10	0 8	0	6 0	0
7	0 0	3 682	0 2	1	0 9	4	7 0	0
8	0 0	4 208	0 2	5	0 10	8	8 0	0
9	0 0	4 734	0 2	9	0 12	0	9 0	0
10	0 0	5 260	0 3	0	0 13	4	10 0	0
11	0 0	5 786	0 3	4	0 14	8	11 0	0
12	0 0	6 312	0 3	8	1 0	0	12 0	0

## Table of Exchange, No. 1—Rupees into Pounds Sterling.

For values of Rupees from 1s. 3½d. to 1s. 8½d.

Rupees.	1s. 3½d.	1s. 3¾d.	1s. 3½d.	1s. 3¾d.	1s. 3½d.	1s. 3¾d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 3½	0 1 3¾	0 1 3½	0 1 3¾	0 1 3½	0 1 3¾
3	0 3 10½	0 3 10¾	0 3 10½	0 3 10¾	0 3 11	0 3 11½
5	0 6 5½	0 6 5¾	0 6 5½	0 6 5¾	0 6 6	0 6 6½
10	0 12 11	0 12 11½	0 13 0	0 13 0½	0 13 1	0 13 1½
20	1 5 10	1 5 11	1 6 0	1 6 0½	1 6 1	1 6 1½
30	1 18 9	1 18 10½	1 19 0	1 19 0½	1 19 1	1 19 1½
40	2 11 8	2 11 10	2 12 1	2 12 3	2 12 6	2 12 8
50	3 4 7	3 4 10	3 5 1	3 5 4	3 5 7	3 5 10
60	3 17 6	3 17 9½	3 18 1	3 18 5	3 18 9	3 19 0
70	4 10 5	4 10 9½	4 11 1	4 11 6	4 11 10½	4 12 2
80	5 3 4	5 3 8	5 4 2	5 4 7	5 5 0	5 5 5
90	5 16 3	5 16 8½	5 17 2½	5 17 7½	5 18 1	5 18 7
100	6 9 2	6 9 8½	6 10 2	6 10 8½	6 11 3	6 11 9½
250	16 2 11	16 4 2½	16 5 6½	16 6 9½	16 8 1½	16 9 5
400	25 16 8	25 18 9	26 0 10	26 2 11	26 5 0	26 7 1
500	32 5 10	32 8 5½	32 11 0½	32 13 7½	32 16 3	32 18 10½
750	48 8 0	48 12 7½	48 16 6½	49 0 5½	49 4 4½	49 8 3½
1,000	64 11 8	64 16 10½	65 2 1	65 7 3½	65 12 0	65 17 8½

For values of Rupees from 1s. 3½d. to 1s. 4½d.

Rupees.	1s. 3½d.	1s. 3¾d.	1s. 3½d.	1s. 4d.	1s. 4½d.	1s. 4¾d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 3½	0 1 3¾	0 1 3½	0 1 4	0 1 4	0 1 4
3	0 3 11½	0 3 11¾	0 3 11½	0 4 0	0 4 0	0 4 0
5	0 6 7½	0 6 7¾	0 6 7½	0 6 8	0 6 8	0 6 8½
10	0 13 2½	0 13 3	0 13 3½	0 13 4	0 13 4½	0 13 4½
20	1 6 7½	1 6 8	1 6 7½	1 6 8	1 6 8	1 6 9
30	1 19 8½	1 19 10	1 19 11	2 0 0	2 0 0½	2 0 1
40	2 12 11	2 13 1	2 13 2½	2 13 4	2 13 5½	2 12 6
50	3 6 1½	3 6 4½	3 6 6½	3 6 8	3 6 9	3 6 11
60	3 19 4	3 19 8½	3 19 10	4 0 0	4 0 1½	4 0 3½
70	4 12 7½	4 12 11½	4 13 1½	4 13 4	4 13 6	4 13 8½
80	5 5 10	5 6 3	5 6 5½	5 6 8	5 6 10½	5 7 1
90	5 19 0½	5 19 6½	5 19 9	6 0 0	6 0 2½	6 0 5½
100	6 12 3½	6 12 9½	6 13 0½	6 13 4	6 13 7	6 13 10½
250	16 10 8½	16 12 0½	16 12 8	16 13 4	16 13 11½	16 14 7½
400	26 9 2	26 11 3	26 12 3½	26 13 4	26 14 4½	26 15 5
500	33 1 5½	33 4 0½	33 5 4½	33 6 8	33 7 11½	33 9 8½
750	49 12 2½	49 16 1	49 18 0½	50 0 0	50 1 11½	50 3 10½
1,000	66 2 11	66 8 1½	66 10 8½	66 13 4	66 15 11½	66 18 6½

For values of Rupees from 1s. 4½d. to 1s. 4¾d.

Rupees.	1s. 4½d.	1s. 4¾d.	1s. 4½d.	1s. 4¾d.	1s. 4¾d.	1s. 4¾d.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1	0 1 4	0 1 4	0 1 4	0 1 4	0 1 4	0 1 4
3	0 4 0½	0 4 0½	0 4 0½	0 4 0½	0 4 0½	0 4 0½
5	0 6 8½	0 6 8½	0 6 8½	0 6 8½	0 6 9	0 6 9½
10	0 13 4½	0 13 5½	0 13 5½	0 13 6	0 13 6	0 13 6½
20	1 6 9½	1 6 10½	1 6 11	1 6 11½	1 7 0	1 7 1
30	2 0 2½	2 0 3½	2 0 4½	2 0 5½	2 0 6½	2 0 7½
40	2 13 7	2 13 9	2 13 10½	2 13 11½	2 14 0	2 14 2
50	3 7 0½	3 7 2½	3 7 3½	3 7 5½	3 7 6½	3 7 8½
60	4 0 5½	4 0 7½	4 0 9½	4 0 11½	4 1 1	4 1 3
70	4 13 10½	4 14 0	4 14 2½	4 14 5	4 14 7½	4 14 9½
80	5 7 3½	5 7 6	5 7 8½	5 7 11	5 8 1½	5 8 4
90	6 0 8½	6 0 11½	6 1 2	6 1 4½	6 1 7	6 1 10½
100	6 14 1½	6 14 4½	6 14 7½	6 14 10½	6 15 1½	6 15 5
250	16 15 8	16 16 11½	16 16 7	16 17 2½	16 17 10½	16 18 6
400	26 16 5	26 17 6	26 18 6½	26 19 7	27 0 7½	27 1 8
500	33 10 6½	33 11 10	33 13 2	33 14 5½	33 15 9½	33 17 1
750	50 5 10	50 7 9½	50 9 9	50 11 8½	50 13 7½	50 15 7½
1,000	67 1 1½	67 3 9	67 6 4½	67 8 11½	67 11 6½	67 14 2

## Table of Exchange, No. 2—Pounds Sterling into Rupees.

For values of Rupees from 1s. 3½d. to 1s. 9½d.

sterling.	at 1s. 3½d.	at 1s. 3¾d.	at 1s. 3d.	at 1s. 3½d.	at 1s. 3d.	at 1s. 3½d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0	0 1 0
0 0 4	0 4 1	0 4 1	0 4 1	0 4 1	0 4 0	0 4 0
0 0 6	0 6 2	0 6 2	0 6 1	0 6 1	0 6 1	0 6 0
0 0 9	0 9 3	0 9 3	0 9 2	0 9 2	0 9 1	0 9 1
0 1 0	0 12 4	0 12 4	0 12 3	0 12 2	0 12 2	0 12 1
0 2 6	1 14 11	1 14 10	1 14 7	1 14 6	1 14 5	1 14 3
0 5 0	3 13 11	3 13 8	3 13 5	3 13 2	3 12 11	3 12 8
0 7 6	5 12 10	5 12 6	5 12 1	5 11 9	5 11 5	5 10 11
0 10 0	7 11 10	7 11 4	7 10 10	7 10 4	7 9 10	7 9 5
1 0 0	15 7 8	15 6 8	15 5 9	15 4 9	15 3 9	15 2 10
5 0 0	77 6 8	77 1 8	76 12 9	76 7 10	76 3 0	75 14 0
10 0 0	154 13 5	154 3 5	153 9 7	152 15 9	152 6 1	151 12 5
25 0 0	387 1 6	385 8 7	383 15 11	382 7 5	380 15 2	379 7 1
50 0 0	464 8 3	462 10 4	460 12 9	458 15 5	457 2 3	455 5 4
50 0 0	774 3 1	771 1 4	768 0 0	764 15 0	761 14 5	758 14 6
75 0 0	1,161 4 7	1,156 9 11	1,151 15 11	1,147 6 5	1,142 13 8	1,138 5 4
100 0 0	1,548 6 2	1,542 2 8	1,536 0 0	1,529 11 1	1,523 12 11	1,517 12 7

For values of Rupees from 1s. 3¾d. to 1s. 4½d.

sterling.	at 1s. 3¾d.	at 1s. 3½d.	at 1s. 3¾d.	at 1s. 4d.	at 1s. 4½d.	at 1s. 4¾d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 1 0	0 1 0	1 0 0	0 1 0	0 0 11	0 0 11
0 0 4	0 4 0	0 4 0	0 4 0	0 4 0	0 3 11	0 3 11
0 0 6	0 6 0	0 6 0	0 6 0	0 6 0	0 5 11	0 5 11
0 0 9	0 9 0	0 9 0	0 9 0	0 9 0	0 8 11	0 8 11
0 1 0	0 12 1	0 12 0	0 12 0	0 12 0	0 11 11	0 11 11
0 2 6	1 14 2	1 14 1	1 14 0	1 14 0	1 13 10	1 13 9
0 5 0	3 12 2	3 12 2	3 12 1	3 12 0	3 11 10	3 11 9
0 7 6	5 10 7	5 10 3	5 10 1	5 10 0	5 9 9	5 9 7
0 10 0	7 8 11	7 8 7	7 8 2	7 8 0	7 7 9	7 7 6
1 0 0	15 1 10	15 0 11	15 0 5	15 0 0	14 15 6	14 15 0
5 0 0	75 9 5	75 4 8	75 2 4	75 0 0	74 13 7	74 11 3
10 0 0	151 2 10	150 9 4	150 4 8	150 0 0	149 11 3	149 6 7
25 0 0	377 15 2	376 7 5	375 11 8	375 0 0	374 4 2	373 8 6
50 0 0	453 8 8	451 12 2	450 14 1	450 0 0	449 1 11	448 3 11
50 0 0	755 14 5	752 17 0	751 7 5	750 0 0	748 8 7	747 1 3
75 0 0	1,113 13 8	1,129 6 6	1,127 3 2	1,125 0 0	1,122 12 10	1,120 9 10
100 0 0	1,511 12 11	1,505 14 1	1,502 14 11	1,500 0 0	1,497 1 2	1,494 2 7

For values of Rupees from 1s. 4¾d. to 1s. 4½d.

sterling.	at 1s. 4¾d.	at 1s. 4½d.	at 1s. 4¾d.	at 1s. 4½d.	at 1s. 4¾d.	at 1s. 4½d.
£ s. d.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
0 0 1	0 0 11	0 0 11	0 0 11	0 0 11	0 0 11	0 0 11
0 0 4	0 3 11	0 3 11	0 3 11	0 3 11	0 3 11	0 3 11
0 0 6	0 5 11	0 5 11	0 5 11	0 5 11	0 5 11	0 5 10
0 0 9	0 8 11	0 8 11	0 8 10	0 8 10	0 8 10	0 8 10
0 1 0	0 11 11	0 11 10	0 11 10	0 11 10	0 11 10	0 11 9
0 2 6	1 13 9	1 13 8	1 13 8	1 13 7	1 13 7	1 13 5
0 5 0	3 11 7	3 11 6	3 11 5	3 11 3	3 11 2	3 11 0
0 7 6	5 9 5	5 9 0	5 9 1	5 8 11	5 8 9	5 8 6
0 10 0	7 7 3	7 7 0	7 6 10	7 6 7	7 6 4	7 6 1
1 0 0	14 4 7	14 14 1	14 13 8	14 13 2	14 12 9	14 12 3
5 0 0	74 9 0	74 6 8	74 4 4	74 2 1	73 15 9	73 13 3
10 0 0	149 2 0	148 13 4	148 8 9	148 4 2	147 15 7	147 11 0
25 0 0	372 13 0	372 1 5	371 5 10	370 10 5	369 15 0	369 3 7
50 0 0	447 6 0	446 8 2	445 10 4	444 12 7	443 14 10	443 1 2
50 0 0	745 10 1	744 2 11	742 11 11	741 5 0	739 14 1	738 7 4
75 0 0	1,118 7 1	1,116 4 5	1,114 1 10	1,111 15 5	1,109 13 1	1,107 11 0
100 0 0	1,491 4 2	1,488 5 11	1,485 7 10	1,482 10 0	1,479 12 3	1,476 14 9

# Indian Stamp Duties.

	Rs. a.		Rs. a.
<i>Acknowledgment of Debt</i> ex. Rs. 20 .. 0 1		In any other case .. .. 5 0	
<i>Affidavit or Declaration</i> .. .. 1 0		<i>Cancellation</i> .. .. 5 0	
<i>Agreement or Memo. of Agreement,</i>		<i>Certificate or other Document relating to</i>	
(a) If relating to the sale of a bill		Shares .. .. 0 1	
of exchange .. .. 0 2		<i>Charter Party</i> .. .. 1 0	
(b) If relating to sale of a Govern-		<i>Cheque</i> .. .. 0 1	
ment security, or share in an in-		<i>Composition—Deed</i> .. .. 10 0	
corporated company or other body		<i>Conveyance, not being a Transfer—</i>	
corporate—Subject to a maximum		Not exceeding Rs. 50 .. .. 0 8	
of Rs. 10, a. 1 for every Rs. 10,000		Exceeding Rs. 50, not exceeding	
or part.		Rs. 100 .. .. 1 0	
(c) If not otherwise provided for .. 0 8		For every Rs. 100 in excess of Rs. 100	
<i>Appointment in execution of a power</i> .. 15 0		up to Rs. 1,000 .. .. 1 0	
<i>Articles of Association of Company</i> .. 25 0		For every Rs. 500, or part thereof, in	
<i>Articles of Clerkship</i> .. .. 250 0		excess of Rs. 1,000 .. .. 5 0	
<i>Award, any decision in writing by an</i>		<i>Copy or Extract—If the original was not</i>	
Arbitrator, other than by an Order of		chargeable with duty, or if duty with	
the Court. Where the value does not		which it was chargeable does not	
exceed Rs. 1,000, same duty as a Bond.		exceed 1 Rupee .. .. 0 8	
In any other case .. .. 5 0		In any other case .. .. 1 0	
<i>Bill of Exchange or Promissory Note</i>		<i>Counterpart or Duplicate—If the duty</i>	
payable on demand .. .. 0 1		with which the original instrument is	
Where payable otherwise than on demand		chargeable does not exceed one rupee	
but not more than one year after date or		—The same duty as is payable on the	
sight—Not exc. Rs. 200, a. 3; exc. Rs.		original. In any other case .. .. 1 0	
200, not exc. Rs. 400, a. 6; exc. Rs. 400,		<i>Delivery Order</i> .. .. 0 1	
not exc. Rs. 600, a. 9; exc. Rs. 600, not		<i>Entry in any High Court of an Advocate</i>	
exc. Rs. 800, a. 12; exc. Rs. 800, not exc.		or Vakil .. .. 500 0	
Rs. 1,000, a. 15; exc. Rs. 1,000, not exc.		In the case of an Attorney .. .. 250 0	
Rs. 1,200, R. 1 a. 2; exc. Rs. 1,200, not		<i>Instrument—Apprenticeship</i> .. .. 5 0	
exc. Rs. 1,600, R. 1 a. 8; exc. Rs. 1,600,		Divorce .. .. 1 0	
not exc. Rs. 2,500, Rs. 2, a. 4; exc. Rs.		Other than Will, recording an adoption	
2,500, not exc. Rs. 5,000, Rs. 4 a. 8; exc.		or conferring or purporting to confer	
Rs. 5,000, not exc. Rs. 7,500, Rs. 6 a. 12;		Authority to adopt .. .. 10 0	
exc. Rs. 7,500, not exc. Rs. 10,000, Rs. 9;		<i>Lease—Where rent is fixed and no pre-</i>	
exc. Rs. 10,000, not exc. Rs. 15,000, Rs.		mium is paid, for less than 1 year, same	
13 a. 8; exc. Rs. 15,000, not exc. Rs.		duty as Bond for whole amount; not	
20,000, Rs. 18; exc. Rs. 20,000, not exc.		more than 3 years, same as Bond for	
Rs. 25,000, Rs. 22 a. 8; exc. Rs. 25,000,		average annual rent reserved; over 3	
not exc. Rs. 30,000, Rs. 27; and for every		years, same as Conveyance for consid-	
add. Rs. 10,000, or part thereof, in excess		eration equal to amount or value of	
of Rs. 30,000, Rs. 9.		the average annual rent reserved; for	
Where payable at more than one year		indefinite term, same as Conveyance	
after date or sight, same duty as a		for a consideration equal to the amount	
Bond.	Rs. a.	or value of the average annual rent	
<i>Bill of Lading</i> .. .. 0 4		which would be paid or delivered for	
<i>Bond (not otherwise provided for)—</i>		the first ten years if the lease continued	
Not exc. Rs. 10 .. .. 0 2		so long; in perpetuity, same as Conve-	
Exc. Rs. 10, but not exc. Rs. 50 .. 0 4		yance for consideration equal to one-	
Exc. Rs. 50, but not exc. Rs. 100 .. 0 8		fifth of rents paid in respect of first	
Up to Rs. 1,000, every Rs. 100 .. 0 8		50 years. Where there is premium	
For every Rs. 500 or part, beyond		and no rent, same as Conveyance for	
Rs. 1,000 .. .. 2 8		amount of premium; premium with	
<i>Bond, Administration, Customs, Security</i>		rent, same as Conveyance for amount	
<i>or Mortgage Deed—For amount not</i>		of premium, and same duty as Lease	
exceeding Rs. 1,000, same duty as a		without premium.	
Bond.			

	Rs. a.
<i>Attor</i> —Allotment of Shares .. ..	0 1
Credit .. ..	0 1
License .. ..	10 0
<i>Memo. of Association of Company</i> —If accompanied by Articles of Association	15 0
If not so accompanied .. ..	40 0
<i>Notarial Act</i> .. ..	1 0
<i>Vote or Memo</i> , intimating the purchase or sale—	
(a) Of any Goods exceeding in value Rs. 20 .. ..	0 2
(b) Of any Stock or marketable Security exceeding in value Rs. 20—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000, or part.	
<i>Vote of Protest</i> by a Ship's Master ..	0 8
<i>Partnership</i> —Where the capital does not exceed Rs. 500 .. ..	2 8
In any other case .. ..	10 0
Dissolution of .. ..	5 0
<i>Policy of Insurance</i> —	
(1). <i>Sea</i> —Where premium does not exceed rate of 2a., or $\frac{1}{2}$ per cent. of amount insured .. ..	0 1
In any other case for Rs. 1,500 or part thereof .. ..	0 1
(2). <i>For time</i> —For every Rs. 1,000 or part insured, not exc. 6 months ..	0 2
Exceeding 6 and not exceeding 12 months .. ..	0 4
If drawn in duplicate, for each part:—Half the above rates, for Sea and Time.	
(3). <i>Fire</i> —When the sum insured does not exceed Rs. 5,000 .. ..	0 8
In any other case .. ..	1 0
In respect of each receipt for any payment of a premium on any renewal of an original policy—One half of the duty payable in respect of the original policy in addition to the amount, if any, chargeable under Art. 53 ( <i>Receipt</i> ).	
(4). <i>Accident and Sickness</i> —Against Railway accident, valid for a single journey only .. ..	0 1
In any other case—for the maximum amount which may become payable in the case of any single accident or sickness where such amount does not exceed Rs. 1,000, and also where amount exc. Rs. 1,000, for every Rs. 1,000 or part .. ..	0 2
(5). <i>Life, or other Insurance, not specially provided for</i> —	
For every sum insured not exceeding Rs. 250 .. ..	0 2
For every sum insured exceeding Rs. 250 but not exceeding Rs. 500 .. ..	0 4
For every sum of Rs. 1,000 in excess of Rs. 500 .. ..	0 6
If drawn in duplicate, for each part—	
Half the above rates.	

	Rs. a.
In case of a re-insurance by one Company with another— $\frac{1}{2}$ of duty payable in respect of the original insurance, but not less than 1 anna, or more than 1 R.	
<i>Power of Attorney</i> —	
For the sole purpose of procuring the registration of one or more documents in relation to a single transaction or for admitting execution of one or more such documents .. ..	0 8
When required in suits or proceedings under the Presidency Small Causes Courts Act, 1882 .. ..	0 8
Authorising 1 person or more to act in a single transaction other than that mentioned above .. ..	1 0
Authorising not more than 5 persons to act jointly and severally in more than 1 transaction, or generally ..	5 0
Authorising more than 5 but not more than 10 persons to act .. ..	10 0
When given for consideration and authorising the Attorney to sell any immovable property—The same duty as a Conveyance for the amount of the consideration.	
In any other case, for each person authorised .. ..	1 0
<i>Protest of Bill or Note</i> .. ..	1 0
<i>Proxy</i> .. ..	0 1
<i>Receipt for value exc. Rs. 20</i> .. ..	0 1
<i>Shipping Order</i> .. ..	0 1
<i>Surrender of Lease</i> —When duty with which lease is chargeable does not exceed Rs. 5.—The duty with which such Lease is chargeable.	
In any other case .. ..	5 0
<i>Transfer of Shares</i> —One Half of the duty payable on a Conveyance for a consideration equal to the value of the share.	
<i>Transfer of any Interest secured by a Bond, Mortgage-deed, or Policy of Insurance</i> —If duty on such does not exceed Rs. 5.—The duty with which such Bond, &c., is chargeable.	
In any other case .. ..	5 0
<i>Transfer of Lease</i> by way of assignment and not by way of under-lease—The same duty as a conveyance for a consideration equal to the amount of the consideration for the transfer.	
<i>Trust, Declaration of</i> —Same duty as a Bond for a sum equal to the amount or value of the property concerned, but not exceeding .. ..	15 0
<i>Revocation of</i> —Ditto, but not exceeding .. ..	10 0
<i>Warrant for Goods</i> .. ..	0 4



## FOREIGN MONEYS, AND THEIR ENGLISH EQUIVALENTS.

## FULL EXCHANGE VALUES.

FULL EXCHANGE VALUES.				£	s.	d.
America—(United States) Eagle	..	2	1	1		
Dollar of 100 Cents	..	0	4	2		
Cent	..	0	0	0 1/2		
Argentina—Peso	..	0	3	11 1/2		
Austria—Silver Crown	..	0	0	10		
10 Kreuzers or 20 Hellers	..	0	0	2		
Belgium—Gold Ten-Franc Piece	..	0	7	11 1/2		
Silver Five Franc	..	0	3	11 1/2		
" Franc	..	0	0	9 1/2		
Chilian—Peso	..	0	1	6		
Denmark, Norway and Sweden—	0	1	1	1 1/2		
Krone 100 Ore—1 Krone.						
Egypt—£E of 100 Piastres	..	1	0	3 1/2		
One Piastre (about)	..	0	0	2 1/2		
France—Gold Twenty-Franc Piece	..	0	15	10 1/2		
Silver Five-Franc Piece	..	0	3	11 1/2		
Franc	..	0	0	9 1/2		
Germany—(New Coinage).—						
Gold 20-Mark Piece	..	0	10	7		
" 10 " " "	..	0	9	9 1/2		
Silver 5 " " "	..	0	4	10 1/2		
" 1 " " "	..	0	0	11 1/2		
" 1/2 " " "	..	0	0	5 1/2		
2 Thaler Pieces	..	0	5	10 1/2		
1 " Piece	..	0	2	11 1/2		
Greece—Twenty-Drachmai Gold						
Piece	..	0	15	10		
One Drachma (silver)	..	0	0	9 1/2		
Holland—Ten Florins (Gulden)	..	0	16	8		
Florin (Gulden)	..	0	1	8		
India—1 Rupee (varying in value)	0	1	4			
1/2 " " "	0	0	8			
1/4 " " "	0	0	4			
Since 1899 the Sovereign has been						
legal tender at the ratio of 15 rupees						
to the £ sterling (=1s. 4d. the rupee).						
Italy—Gold 20-Lire Piece	..	0	15	10		
5 " " " "	..	0	8	11 1/2		
One Lira (Silver)	..	0	0	9 1/2		
Japan—Gold 20 Yen Pieces	..	2	0	11 1/2		
Silver 50 Sen Pieces	..	0	1	0 1/2		
Value in exchange—1 Yen=100 Sen=	2	0	1/2			
Peru—Sol, Silver	..	0	2	0		
Portugal—Gold Milreis	..	0	4	5 1/2		
Silver Half Milreis	..	0	2	2 1/2		
100 Reis	..	0	0	5 1/2		
Russia—Half Imperial	..	0	15	9 1/2		
Silver Rouble	..	0	2	1 1/2		
Ten Kopecks	..	0	0	1 1/2		
Spain—(Gold)—25 Pesetas	..	0	19	9 1/2		
(Silver)—5 Pesetas	..	0	3	11 1/2		
2 " " " "	..	0	1	6 1/2		
1 Pesta	..	0	0	9 1/2		
The Peseta=100 Centimos. (Centimes).						
Switzerland—Gold 20-Franc Piece	..	0	15	10 1/2		
Silver 5-Franc Piece	..	0	3	11 1/2		
" Franc	..	0	0	9 1/2		
Turkey—Gold Medjidie	..	0	18	0 1/2		
Silver Medjidie	..	0	3	7		
Piastre	..	0	0	2 1/2		

## ECLIPSES IN 1917.

Of the SUN, Four, of the MOON, Three.

I. JANUARY 8. Total Eclipse of the Moon Visible in Central and Western Europe, N. W. Africa, the Atlantic, America, the Pacific, N. E. of Asia, and E. of Australia

	h.	m.
Moon enters shadow	..	5 50 a.m.
Total eclipse begins	..	7 0 " "
" ends	..	8 29 " "
Moon leaves shadow	..	9 39 " "

II. JANUARY 23. Partial Eclipse of the Sun. On the S. E. Coast of England the Eclipse ends at sunrise. Visible on the Continent of Europe, except West of a line from Almeria through Havre and Vado, in N. Africa and in Asia, except N. and E. of Siberia and E. of a line from Karachi to Uga.

	h.	m.	Long.	Lat.
Eclipse begins	..	5 43 a.m.	in 18° E	28° N
" ends	..	9 13 " "	90° E	60° N

III. JUNE 19. Partial Eclipse of the Sun. Visible in N. and W. of Canada, N. of Scandinavia, Russia, Siberia and the Arctic regions.

	h.	m.	Long.	Lat.
Eclipse begins	..	11 36 a.m.	in 119° W	53° N
" ends	..	2 56 p.m.	78° E	46° N

IV. JULY 4. Total Eclipse of the Moon. Visible in Asia (except the N. E.), Australia, Africa, Europe and S. America.

	h.	m.
Moon enters shadow	..	7 52 p.m.
Total eclipse begins	..	8 51 " "
" ends	..	10 27 " "
Moon leaves shadow	..	11 25 " "

V. JULY 19. Partial Eclipse of the Sun Visible only in the Antarctic.

	h.	m.	Long.	Lat.
Eclipse begins	..	1 56 a.m.	in 94° E	53° S
" ends	..	3 28 " "	124° E	60° S

VI. December 14. Annular Eclipse of the Sun. Annular phase visible only in the Antarctic; partial eclipse in E. and S. of S. America and S. W. of Australia.

	h.	m.	Long.	Lat.
Eclipse begins	..	7 10 a.m.	in 36° W	35° S
Central eclipse begins	..	8 44 " "	88° W	59° S
" ends	..	10 10 " "	156° E	56° S
" ends	..	11 44 " "	107° E	31° S
At Perth, W. A. Eclipse begins at 6h 16m p.m.				
Standard Time.				

VII. DECEMBER 28. Total Eclipse of the Moon. Visible in N. and S. America, the Pacific Eastern Asia and Australia.

	h.	m.
Moon enters shadow	..	8 5 a.m.
Total eclipse begins	..	9 38 " "
" ends	..	9 55 " "
Moon leaves shadow	..	11 27 " "
The time standard used is Greenwich mean time, unless otherwise stated.		

For many years Indian time was in a state of chaotic confusion. What was called Madras or Railway time was kept on all the railways; and each great centre of population kept its own local time, which was not based on any common scientific principle and was divorced from the standards of all other countries. It was with a view to remedying this confusion that the Government of India took the matter up in 1904, and addressed to the Local Governments, and through them to all local bodies, a long letter which reviewed the situation and made suggestions for the future. The essential points in this letter are indicated below:

"In India we have already a standard time, which is very generally, though by no means universally, recognised. It is the Madras local time, which is kept on all railway and telegraph lines throughout India and which is 5h. 21m. 10s. in advance of Greenwich. Similarly, Rangoon local time is used upon the railways and telegraphs of Burma, and is 6h. 24m. 47s. ahead of Greenwich. But neither of these standards bears a simple and easily remembered relation to Greenwich time.

"The Government of India have several times been addressed by Scientific Societies, both in India and in England, and urged to fall into line with the rest of the civilised world. And now the Royal Society has once more returned to the attack. The Committee of that Society which advises the Government of India upon matters connected with its observatories, writes—'The Committee think that a change from Madras time to that corresponding to a longitude exactly 5½ hours east of Greenwich would be an improvement upon the existing arrangements; but that for international scientific purposes the hourly zone system, making the time 5 hours in advance of Greenwich in the west, and 6 hours in advance in the east of India, would be preferable.'

"Now if India were connected with Europe by a continuous series of civilised nations with their continuous railway systems all of which had adopted the European hour-zone system, it would be imperative upon India to conform and to adopt the second suggestion. But as she is not, and as she is as much isolated by uncivilised States as Cape Colony is by the ocean, it is open to her to follow the example of that and some other similarly situated colonies and to adopt the first suggestion.

"It is believed that this will be the better solution. There are obvious objections to drawing an arbitrary line right across the richest and most populous portions of India, and so as to bisect all the main lines of communication, and keeping times differing by an hour on opposite sides of that line. India has become accustomed to a uniform standard in the Madras time of the railways; and the substitution for it of a double standard would appear to be a retrograde step; while it would, in all probability, be strongly opposed by the railway authorities. Moreover, it is very desirable that whatever system is adopted should be followed by all Europeans and Indians alike; and it is certain that the double standard would puzzle the latter greatly; while by emphasising the fact that railway differed from local time, it might postpone or even altogether prevent the acceptance of the former instead of the latter by people generally over a large part of India. The one great advantage which the second

possesses over the first alternative is, that under the former, the difference between local and standard time can never exceed half an hour; whereas under the latter it will even exceed an hour in the extreme cases of Karachi and Quetta. But this inconvenience is believed to be smaller than that of keeping two different times on the Indian system of railways and telegraphs.

"It is proposed, therefore, to put on all the railway and telegraph clocks in India by 8m. 50s. They would then represent a time 5½ hours faster than that of Greenwich, which would be known as **Indian Standard Time**; and the difference between standard and local time at the places mentioned below would be approximately as follows, the figures representing minutes, and F. and S. meaning that the standard time is in advance of or behind local time respectively:—Dibrugarh 51 S., Shillong 38 S., Calcutta 24 S., Allahabad 2 F., Madras 9 F., Lahore 33 F., Bombay 39 F., Peshawar 44 F., Karachi 62 F., Quetta 62 F.

"This standard time would be as much as 54 and 55 minutes behind local time at Mandalay and Rangoon, respectively; and since the railway system of Burma is not connected with that of India, and already keeps a time of its own, namely: Rangoon local time, it is not suggested that Indian Standard Time should be adopted in Burma. It is proposed, however, that instead of using Rangoon Standard Time as at present, which is 6h. 24m. 47s. in advance of Greenwich, a Burma Standard Time should be adopted on all the Burmese railways and telegraphs, which would be one hour in advance of Indian Standard Time, or 6½ hours ahead of Greenwich time, and would correspond with 97° 30' E. longitude. The change would bring Burma time into simple relation, both with European and with Indian time, and would (among other things) simplify telegraphic communication with other countries.

"Standard time will thus have been fixed for railways and telegraphs for the whole of the Indian Empire. Its general adoption for all purposes, while eminently advisable, is a matter which must be left to the local community in each case."

It is difficult to recall, without a sense of bewilderment, the reception of this proposal by various local bodies. To read now the fears that were entertained if Standard Time was adopted is a study in the possibilities of human error. The Government scheme left local bodies to decide whether or not they would adopt it. Calcutta decided to retain its own local time, and to-day Calcutta time is still twenty-four minutes in advance of Standard Time. In Bombay the first reception of the proposal was hostile; but on reconsideration the Chamber of Commerce decided in favour of it and so did the Municipality. Subsequently the opposing element in the Municipality brought in a side resolution, by which the Municipal clocks were put at Bombay time which is thirty-nine minutes behind Standard Time. On the 1st January 1906 all the railway and telegraph clocks in India were put at Indian Standard Time; in Burma the Burma Standard Time became universal. Calcutta retains its former Calcutta time; but in Bombay local time is retained only in the clocks which are maintained by the Municipality and in the establishments of some orthodox Hindus. Elsewhere Standard Time is universal.

# The Calendars.

A full Calendar will be found at the beginning of this book. Below are given details of the other Calendars in use in India.

The *Jewish* Calendar is in accordance with the system arranged A.D. 358. The Calendar dates from the Creation, which is fixed as 3,760 years and 8 months before the beginning of the Christian Era; the year is Luni-solar.

The *Mohammedan*, or era of the Hejira, dates from the day after Mahomet's flight from Mecca, which occurred on the night of July 15, 622 A.D. The months are Lunar.

The *Fasli* year was derived from a combination of the Hejira and Samvat years by the order of Akbar; it is Luni-solar. The *Bengali* year seems also to have been related at one time to the Hejira, but the fact of its being Solar made it lose 11 days each year.

The *Samvat* era dates from 57 B.C., and is Luni-solar. The months are divided into two fortnights—*sudi*, or bright, and *badi*, or dark. Each fortnight contains 15 tithis, which furnish the dates of the civil days given in our calendars.

## PUBLIC HOLIDAYS IN 1917.

### Parsee (Shehenshahi).

Jamshedji Naoroz	.. ..	March	21
Avan Jashan	.. ..	April	18
Ada Jashan	.. ..	May	17
Zarthost-no-diso	.. ..	June	18
Gatha Gahambars	.. ..	September	8
Parsee New Year	.. ..	"	9
Khordad Sal	.. ..	"	10 & 11
	.. ..	"	16

### Parsee (Kadmi).

Avan Jashan	.. ..	March	19
Jamshedji Naoroz	.. ..	"	21
Ada Jashan	.. ..	April	17
Zarthost-no-diso	.. ..	May	19
Gatha Gahambars	.. ..	August	9
Parsee New Year	.. ..	"	10
Khordad Sal	.. ..	"	11
	.. ..	"	17

### Mahomedan (Sunni).

Bara Wafat	.. ..	January	7
Shab-e-Barat	.. ..	June	6
Ramzan 'Id	.. ..	July	21
Ashura and Mohurram	.. ..	October	26
	.. ..	"	27
Mahim Fair & Bara Wafat	.. ..	December	28
	.. ..	"	28

### Mahomedan (Shiah).

Id-e-Mavud	.. ..	January	12
Shahadat-i-Huzrat Ali	.. ..	July	11
Ramzan-Id	.. ..	"	21
Bakhti'Id	.. ..	September	27
Ashura and Mohurram	.. ..	October	26
	.. ..	"	27
Shahadat-e-Imam Husan	.. ..	December	12

### Hindu.

Makar Sankranti	.. ..	January	13
Maha Shivrati	.. ..	February	20
Holi	.. ..	March	8
Ramnavami	.. ..	"	31
Cocoanut Day	.. ..	August	3
Gokal Ashtami	.. ..	"	10
Ganesh Chaturthi	.. ..	September	20
Dussehra	.. ..	October	25
Diwali	.. ..	November	13
	.. ..	"	14
	.. ..	"	15

### Jewish.

Pesach	.. ..	April	7
	.. ..	"	13
Shabuoth	.. ..	May	27
Tishabeab	.. ..	July	29
Rosh Moshana	.. ..	September	17
	.. ..	"	18
Kippur	.. ..	"	25 & 26
Sukkoth	.. ..	October	1 & 9

### Jain.

Chaitra Sud 15	.. ..	April	7
	.. ..	August	15
	.. ..	"	16
Sharavan Vad 13 to Adhik Bhadrapda Sud 1 & Adhik Bhadrapda Sud 3.	.. ..	"	17
	.. ..	"	18
	.. ..	"	19
	.. ..	"	20
Samvat Sari (Adhik Bhadrapda Sud 4)	.. ..	"	21
Purniman (Adhik Bhadrapda Sud 5)	.. ..	"	22
Kartik Sud. 15	.. ..	November	26

## Public Services Commission.

The report of the Public Services Commission (see p. 507) was published in January, 1917. It is a large blue book of 529 pages. The actual report of the Commissioners, with their recommendations, runs to 65 pages, but the annexures covering the various departments occupy 300 pages. Special minutes relating to the report by members who sign it take up 22 pages, while a long minute, which really constitutes a separate report, by Mr. Abdur Rahim, of the Madras High Court, who regrets he has been unable to agree in the tenor of report or accept the more important of the conclusions of the commissioners, runs to no fewer than 94 pages.

**Conclusions.**—The Commission at the end of their report thus sum up their conclusions:—

At the end of the various annexures to our report we have summarised in detail the recommendations which we have made with regard to each service. The proposals we have put forward for increased expenditure have been framed without regard to the prior claims of the present war on the resources of the country, and may need to be given effect to gradually. Otherwise we have taken into account the existing situation. The main conclusions to which we have come are as follows:—

(i) Where it is necessary to organise the public services into higher and lower branches, this should be arranged on the basis of the work which they are required to do, and not, as is now in some instances the case, of the race of, or the salaries drawn by, their members, or any such artificial distinction (paragraphs 24 to 26).

(ii) Officers promoted from a lower into a higher service should ordinarily be given the same opportunities as officers who have been directly recruited and should be eligible on their merits for appointment to any post in their service. Both classes of officers should be shown on the same list and should take seniority amongst themselves from their date of entry on the list. Except in the case of the Indian civil service all promoted officers should also be made full members of the service into which they are promoted (paragraph 27).

(iii) The practice of employing military officers on civil duties should be continued in the medical, public works, railway, and survey of India departments, and subject to the conditions stated military officers should also be eligible for appointment to the mint department. Elsewhere the practice of recruiting them should be allowed to die out, but this should take place gradually in the case of the civil service in Burma (paragraph 28).

(iv) The practice of employing members of the Indian civil service in other departments should be continued in the post office, and in the Northern India salt revenue, Indian finance and customs departments. Such officers should also continue to supervise the work of the land records (Burma), registration, salt and excise, and survey (Madras) departments.

They should no longer be appointed directors of agriculture, but rural commissionerships should be created and be manned from their ranks. The Inspector-generalships of police should no more be recruited for in the Indian civil service, but Indian civil servants, should continue to be eligible for these appointments subject to the claims of qualified police officers (paragraph 29).

(v) The services which lie between the higher and the subordinate services should no longer be designated "provincial" services. If they are organised provincially they should ordinarily bear the name of their province; for example, the Madras civil service, the Bombay police service, and so on. If they are under the Government of India the terms class I and class II should be used for the two services. These terms should also be used in the education department (paragraph 30).

(vi) The services for which recruitment is now made normally in India should continue to be recruited for in that country. The Indian finance department should be added to this category. The military finance department should be similarly treated, if there are no military considerations to the contrary. Eventually, similar action should be taken with the customs department, but for the present some recruitment in Europe for this department should be permitted. The remaining services for which recruitment is now made wholly in Europe, or partly in Europe and partly in India, should be divided into three main groups. In the first should be placed the Indian civil service and the police department, in which it should be recognised that a preponderating proportion of the officers should be recruited in Europe. In the second should come services like the education, medical, public works and so on, in which there are grounds of policy for continuing to have in the personnel an admixture of both western and eastern elements. For these services arrangements should be made for recruitment in both countries. In the third should be placed certain scientific and technical services, such as the agricultural and civil veterinary departments, etc., for the normal requirements of which it should be the aim to recruit eventually in India. To this end educational institutions should be developed in India on a level with those now existing in Europe so as to produce the necessary supply of candidates (paragraphs 31 and 32).

(vii) No system of state scholarships will provide a suitable method for increasing the number of non-Europeans in the public services (paragraph 35).

(viii) In certain services arrangements should be made for the appointment of a minimum number of Indians, but this should not be made a general practice for fear that the minimum may come to be regarded as a maximum (paragraph 35).

(ix) To secure an increase in the number of non-Europeans employed, so far as this is not obtained automatically by the proposals made with regard to organization and the place of

appointment, different methods should be followed in different services, as detailed in the annexures. Speaking generally, technical institutions in India should be created or expanded; provision should be made for advertising vacancies; Indian members should be appointed to serve on the committees which will advise on the selection of recruits; and, finally, the statistics relating to the employment of members of the various communities should be published every ten years (paragraph 30).

(x) The question of the extent to which the services should be manned by the direct recruitment of untied officers and by the promotion of experienced officers from an inferior service should be settled separately for each service, as explained in the various annexures. But in every case opportunities should be created for young men, and direct recruitment should be encouraged wherever possible (paragraph 37).

(xi) In the present conditions of India no general system of competitive examinations as a means of entry to the public services is suitable, but where such a method exists it should ordinarily be maintained (paragraph 42).

(xii) When nominating direct recruits for admission to the services the authorities in India should act with the advice of committees which should not be purely departmental in character, but should contain persons in touch with educational institutions, and should also have a non-official and an Indian element. Publicity should be given to all vacancies, and applicants should be forbidden to bring outside pressure to bear on individual members of the committees. A similar procedure should be followed in England. Candidates for services recruited in India should ordinarily possess minimum educational qualification. This need not be identical for all candidates, but the standard for all should be the same (paragraph 44).

(xiii) In recruiting specialists care should be taken to draw upon the widest possible field (paragraph 45).

(xiv) Arrangements can best be made for communal representation in India by the exercise of the powers of Government under the system of nomination proposed. No hard and fast rule or proportion is suitable (paragraph 46).

(xv) Except where otherwise provided, direct recruits should be on probation for two years. A probationary course in England should be given only to recruits for the Indian civil and forest services, and in the latter only for so long as recruits are taken from Europe. As the schools of forestry of the United Kingdom are developed, recruits from Europe should be taken from them (paragraph 47).

(xvi) The question of training requires to be considered for each service separately, as explained in the various annexures. Inter-provincial conferences of officers responsible for the training of recruits should be encouraged (paragraph 48).

(xvii) In fixing the salaries of their employees, Government should pay so much and so much only as is necessary to obtain recruits of the right stamp, and to maintain them in such a degree of comfort and dignity as will shield

them from temptation and keep them efficient for the term of their service (paragraph 49).

(xviii) Except where otherwise expressly provided, officers should be remunerated by an incremental scale of salaries on the compartment system. Where this is done the rules with regard to acting allowances should be revised (paragraphs 50 and 51).

(xix) Exchange compensation allowances should no longer be paid, but generally speaking the amounts now drawn on this account should be added to the salaries of officers (paragraph 52).

(xx) The salaries to be paid to Europeans and statutory natives of India respectively should be settled for each service separately and ordinarily in accordance with the principle set out in item xvii above, and not on any general consideration of race or place of recruitment. In services in which different rates are found to be suitable they should be fixed on the merits of each case, and no proportion should be laid down generally as between the amounts payable to the two classes of officers. In services the normal requirements of which will eventually be met in India, the standard scale of salaries should be that considered suitable for statutory natives of India, and special rates should be fixed for Europeans for so long as they are recruited. In certain services in which equality of pay has long been an established practice this should be maintained. In other services officers should be brought to an equality in the administrative ranks, and earlier in the education department. As a special case statutory natives of India recruited in Europe should be paid as Europeans (paragraphs 53 to 57).

(xxi) The salaries to be paid to officers should be as stated in the various annexures. For recruits in India from the ordinary graduate class, or their equivalent amongst members of the domiciled community, a general scale rising from Rs. 250 to Rs. 500 a month should be introduced. Beyond this there should be selection scales of posts suitable to the circumstance of each service. For services requiring higher initial qualifications higher rates should be adopted (paragraph 58).

(xxii) The necessary steps should be taken to keep the cadres of the services up to a strength sufficient to cope with the work to be done (paragraph 61).

(xxiii) The calculations in accordance with which recruitment is made should be worked out with greater precision, and should be revised periodically with due regard to the requirements of leave and training. More precision is needed in fixing the annual rate of recruitment, and service tables should be prepared and kept up to date for each service or group of services. Distribution lists should be maintained for all services, which are recruited on a system, to show by groups of years the theoretical and actual number of officers present. Excesses or defects should be dealt with at the point where they occur. In spite of these measures blocks in promotion are experienced, special allowances should be given on the merits of each case (paragraphs 62 to 65).

(xxx) An expert committee should be appointed to simplify the present travelling allowance rules, to consider their sufficiency for everyday purposes, and to revise the classification of officers. Immediate measures should be taken to reimburse officers for all reasonable charges incurred by them on transfer from one station to another, whether personal to themselves or on behalf of their families and household establishments (paragraphs 66 to 68).

(xxxi) The rules as to house allowance should be revised on the lines indicated (paragraph 69).

(xxxii) A Burma allowance should be given on the terms stated (paragraph 70).

(xxxiii) Free passages should be given to officers of the services specified (paragraph 71).

(xxxiv) Inefficient officer should be compulsorily retired (paragraph 72).

(xxxv) Officers who are subject to the operation of article 459 of the civil service regulations should be retired at the age of 55, unless Government, in their sole discretion, decide to grant an extension of service (paragraph 73).

(xxxvi) There should be separate European service and Indian service leave rules to regulate the taking of long leave. Speaking generally, officers recruited under European conditions of salary should be subject to the European, and others to the Indian service leave rules (paragraphs 77 and 78).

(xxxvii) The European service leave rules should be simplified, and greater facilities for leave on higher pay should be given by allowing privilege leave to be accumulated up to four months and furlough to be commuted subject

to the restrictions stated (paragraphs 79 and 80).

(xxxviii) The sterling amounts of the allowances payable under the European service leave rules should stand to the rupee amounts in the proportion of 18 to 16 (paragraph 81).

(xxxix) The Indian service leave rules should be simplified; officers subject to them should be allowed to accumulate privilege leave up to four months, and the allowances permissible should be increased to the extent stated (paragraphs 82 and 83).

(xl) The rules relating to study leave should be revised; the arrangements for deputing officers to study particular problems should be made more elastic, and facilities should be given to officers on leave to study voluntarily such problems as interest them (paragraphs 84 to 86).

(xli) With the exceptions specified a officers should be under the same pension rules; all should serve normally for thirty years, but those recruited after the age of twenty-five in the services noted should be granted the concessions indicated, and all should be able to retire optionally on a reduced pension after twenty-five years' service. Government should be able to retire any officer after this period (paragraph 87 to 91).

(xlii) The maximum limits of pension should be increased on the conditions stated and special additional pensions of amount stated should be drawn by the officers noted (paragraphs 92 and 93).

(xliii) A scheme for a general family pension fund, or for separate funds for different classes of officers, should be worked out on a self supporting basis (paragraph 96).



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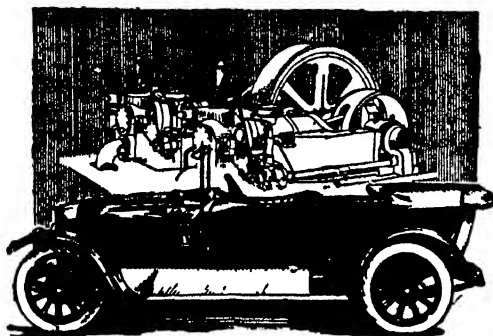
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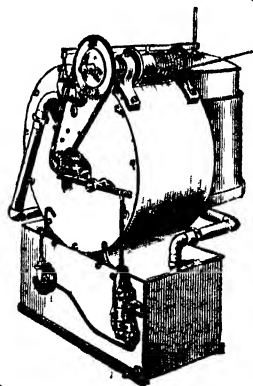
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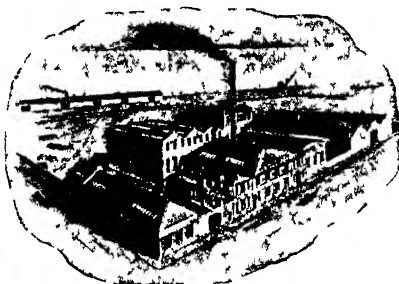




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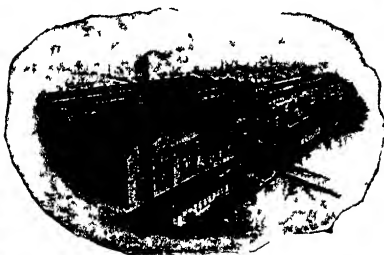
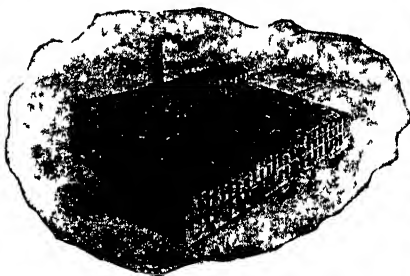
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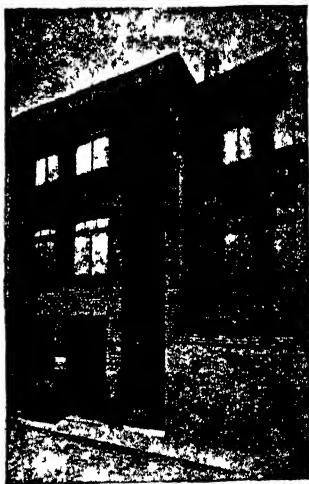
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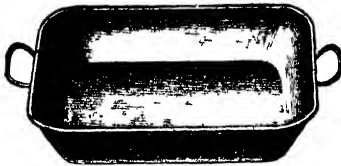
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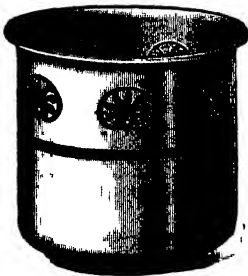
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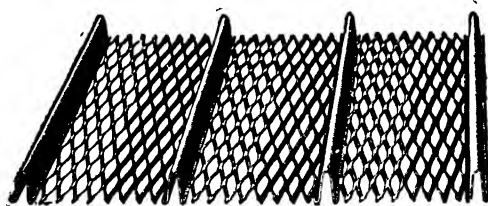
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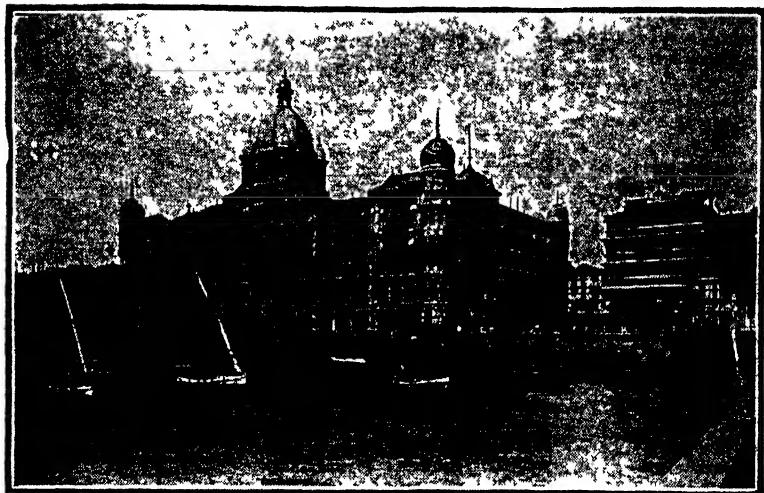
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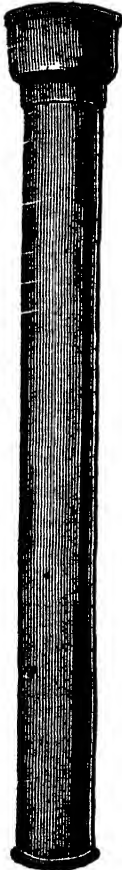
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